

# **OECD Programme for International Student Assessment 2015**

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## **PISA 2015 RELEASED FIELD TRIAL COGNITIVE ITEMS - CPS**

**Doc:** CY6\_TST\_PISA2015FT Released\_Cognitive\_Items

Produced by ETS (Core 3 Contractor)



### **PISA 2015 Contractors**



**PEARSON**



**Σημείωση:**

Το αποδεσμευμένο υλικό για τη Συνεργατική Επίλυση Προβλήματος έχει δοθεί από τους διοργανωτές υπό την μορφή screen shots και δεν είναι διαδραστικό. Ως εκ τούτου το σχετικό υλικό έχει αναρτηθεί στην ιστοσελίδα του ΚΕΕΑ αυτούσιο, όπως έχει δοθεί από τους διοργανωτές, και αποτελεί μία ένδειξη της μορφής των ασκήσεων που περιλαμβάνονται στην εξέταση PISA 2015 για τη Συνεργατική Επίλυση Προβλήματος.

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### Collaborative Problem Solving – Overview

One Collaborative Problem Solving unit from the 2015 Field Trial was approved for release by the Collaborative Problem Solving Expert Group. This unit, The Visit, included 44 measurable student actions (or “items”) and was completed by students during the Field Trial in a mean time of about 17 minutes. A total of six units were developed for the Field Trial and five were moved forward for inclusion in the 2015 Main Study.

As the innovative domain for PISA 2015, Collaborative Problem Solving (CPS) is defined in the draft framework as “the capacity of an individual to effectively engage in a process whereby two or more agents attempt to solve a problem by sharing the understanding and effort required to come to a solution and pooling their knowledge, skills and efforts to reach that solution.” The framework identifies three core collaborative competences:

- Establishing and maintaining a shared understanding
- Taking appropriate action to solve the problem
- Establishing and maintaining team organisation

Additionally, the CPS construct includes core problem solving competencies including:

- Exploring and understanding
- Representing and formulating
- Planning and executing
- Monitoring and reflecting.

Taken together, these form a matrix of CPS competencies, as shown in the figure below. Across the CPS units, items were developed to fit all cells in that matrix.

	<b>(1) Establishing and maintaining shared understanding</b>	<b>(2) Taking appropriate action to solve the problem</b>	<b>(3) Establishing and maintaining team organisation</b>
<b>(A) Exploring and Understanding</b>	(A1) Discovering perspectives and abilities of team members	(A2) Discovering the type of collaborative interaction required and establishing goals	(A3) Understanding roles to solve problem
<b>(B) Representing and Formulating</b>	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)	(B2) Identifying and describing tasks to be completed	(B3) Describing roles and team organisation (communication protocol/rules of engagement)
<b>(C) Planning and Executing</b>	(C1) Communicating with team members about the actions performed	(C2) Enacting plans	(C3) Following rules of engagement
<b>(D) Monitoring and Reflecting</b>	(D1) Monitoring and repairing the shared understanding	(D2) Monitoring results of actions and evaluating success in solving the problem	(D3) Monitoring, providing feedback and adapting the team organisation and roles

The CPS units include chat-based tasks where students interact with one or more agents, or simulated team members, to solve a presented problem. Students are presented with a set of chat options and are asked to select the most appropriate choice. Once selected, the choice displays in the chat history area, and then responses from one or more agents follow. Students can scroll through the history to review chat as needed. Responses from agents are based on student selections. As a result, there are multiple paths through each unit. To ensure that any incorrect or non-optimal selections will not penalise students as they progress through the task, each unit is designed with convergence, or rescue, points. At these points, one of the agents provides necessary information or helps advance the collaborative problem solving process so that students can continue to progress through the task.

In addition to the chat interactions, the CPS units include a task area on the right side of the screen where students can take actions, view notes recorded by agents, or keep track of progress through the task. In the sample screen from part 1 of The Visit shown below, the task area includes clickable links to three websites with information that is needed to solve the problem that has been assigned to the team as well as a notepad where key information is recorded by teammates.

The screenshot shows the PISA 2015 CPS interface with the following components:

- Top Bar:** Includes a navigation bar with icons for back, forward, and search, and the text "PISA 2015".
- Left Panel (Chat Space):**
  - Header:** "Introduction" and "Part 1 - Directions".
  - Section:** "Who's in the Chat" with participants: You, George, Rachel, Brad.
  - Chat History:**
    - You: Brad, you're right that we want them to enjoy themselves, but we should discuss Ms. Cosmo's options first.
    - George: I don't know. Any one of the sites is probably OK.
    - Rachel: You know, the museum of local history would really give a sense of life in our town.
    - Brad: It's kind of boring. Besides, I think it's closed.
  - Text Input:** "You: Does this mean we only have two choices?"
  - Text Input:** "I don't think it's closed. There are ads for the museum all over town."
  - Text Input:** "Rachel, the museum is open only on weekends. Let's look at the other options."
  - Text Input:** "I don't see how we can visit the museum if it's closed."
  - Send Button:** "Send" (disabled).
- Right Panel (Task Space):**
  - Notepad:** "Provides sense of life in our town" and "Travel time is manageable".
  - Options:** "museum of local history" (selected), "community market", and "electric car factory".
  - Information Box:**
    - Location:** 101 Main Street, in the center of town
    - Hours:** Saturday, 10 a.m.-5 p.m., Sunday Noon-5 p.m.
    - On Display:** Our town's history and heritage can be seen in the following exhibits:
      - Clothing, furniture, and room decorations from different periods
      - Antiques donated by generations of local families
      - Maps showing the growth of the town and surrounding areas

Two large blue arrows point upwards from the bottom of the Chat Space and Task Space sections towards the interface, indicating the transition between the two spaces.

**Format for this Released Unit**

Because there are multiple paths through CPS units it is not possible to provide screen shots for each screen in the unit in a clearly understandable way. The screen shots provided show the optimal path through each part of the unit. Descriptions are provided for all alternate paths and their associated items.

For each item, the following information is provided:

<i>Item Number</i>	
<i>Credited Response</i>	
<i>Classification</i>	

Item Number: Each number includes the designation used for CPS (CC), the unit number (101), the part designation (1, 2 or 3) followed by a two-digit item ID.

Credited response: Each credited response, or responses, is listed. For each chat-based item, the correct response can also be identified in the screen shot by the blue highlighting that displays on screen when students select an option. Where more than one response is credited, that is noted in the descriptive text.

Classification: The framework classification for each item is also listed. A letter/number combination references the CPS competencies matrix, as shown on page 47.

***The Visit*****Unit Overview**

The premise for this unit is that a group of international students is coming to visit a school. The student must collaborate with 3 agent teammates and a faculty advisor to plan the visit, assign visitors to guides, and respond to an unexpected problem that arises.

**Part 1: Overview**

In Part 1 of The Visit, the student and three teammates collaborate to identify an appropriate trip to a local point of interest for the visitors. In order to make their recommendation, the team needs to share and discuss their preferences, repair a misunderstanding about when one of the sites is open, and make a final selection.

Challenges requiring collaborative skills include the need for the student to:

- solicit and take into account criteria for assessing the outing options
- clarify statements made by other teammates
- correct misinformation and avoid an impasse
- prompt team members to perform their tasks
- ensure that the final recommendation meets all specified criteria

**Part 1 Introduction**

The opening screen provides an overview for students. The goal for Part 1 is defined and students learn that there are three potential sites to be considered for the trip.

## Part 1 Directions

Directions for the task are presented on the left side of the screen, as shown below. The task pane on the right includes a notepad, where key points from the chat will display, and links to the three local sites under consideration. Clicking on a link displays a brief list of relevant information for each site (location, hours of operation, tour information, and what visitors can see there).

The screenshot shows a computer interface for the PISA 2015 task. The top bar is blue with the text 'PISA 2015' on the left and various icons on the right, including a question mark, a back arrow, and a forward arrow. The main area is divided into two main sections: a 'Part 1 - Directions' pane on the left and a 'Notepad' pane on the right.

**Part 1 - Directions:**

- First the team must choose the site to visit. You and your teammates can use the following features:
  - chat to discuss ideas about the sites
  - links to get information about the sites that will help you reach a decision
  - notepad to keep track of issues and information
- George has begun the chat. When you are ready to join the chat, click on the button below.

**Notepad:**

The notepad pane is currently empty, represented by a yellow grid.

**Local Site Links:**

- museum of local history** (blue square icon)
- community market** (green square icon)
- electric car factory** (purple square icon)

**Join the Chat:**

A button labeled 'Join the Chat' is located in the bottom left corner of the main interface area.

## Part 1 – Sample Screen #1

<i>Item</i>	CC101101
<i>Credited Response</i>	Let's discuss what's necessary for a good visit.
<i>Classification</i>	(B2) Identifying and describing tasks to be completed

The student must select from among four chat choices to respond to George's open-ended question about where to begin. The first and third options are not credited because they are both attempts to avoid taking action. While the second option ("We've got three choices. Let's put it to a vote") might sound collaborative, it does not really help the team solve the presented problem as they do not yet have enough information to select a site. Therefore this option is not credited as correct.

If the student does not select the credited response, Rachel rescues by saying "We need to make a decision soon. Let's talk about what a visit site should be like."

### Part 1 – Sample Screen #2

Brad mentions that the group is supposed to visit someplace local.

The screenshot shows the PISA 2015 digital task interface. At the top, there are navigation icons: a progress bar with five green squares, a clock, a question mark, and arrows for back and forward. The main area is titled 'PISA 2015'.

**Chat Window:** A sidebar titled 'Who's in the Chat' shows participants: You, George, Rachel, and Brad. The conversation log includes:

- George: OK, where do we start?
- You: Let's discuss what's necessary for a good visit.
- Brad: We're supposed to visit someplace local.

**Notepad:** A yellow notepad titled 'Notepad' is shown on the right.

**Local Places:** Below the notepad, there is a list of three icons with labels:
 

- museum of local history (blue building icon)
- community market (green basket icon)
- electric car factory (purple car icon)

**Student Input:** The 'You:' section shows the following messages:
 

- How does that help? Lots of places are local.
- If it's local it could show what life is like around here.
- OK, but we need to hurry up and make a decision.
- It's too bad we can't just take them anywhere we want.

 A 'Send' button is located below these messages.

Item	CC101102
Credited Response	If it's local it could show what life is like around here.
Classification	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)

The second response is credited because it is the only one of the four that helps advance the group's shared understanding of what "local" might mean.

If the student does not select the credited response, George rescues by saying, "So maybe it should give a sense of what our town is like."

### Part 1 – Sample Screen #3

Rachel adds a note to the notepad confirming that the site should “provide sense of life in our town.” Brad comments that, “Local means that the site is not far away.”

The screenshot shows the PISA 2015 digital platform interface. At the top, there are navigation icons: a color palette, a clock, a question mark, and arrows for back and forward. The main menu includes 'Introduction' and 'Part 1 - Directions'. The 'Who's in the Chat' section lists participants: You, George, Rachel, and Brad. The chat history shows the following messages:

- You: Let's discuss what's necessary for a good visit.
- Brad: We're supposed to visit someplace local.
- You: If it's local it could show what life is like around here.
- Rachel: Good – I'll put that on the Notepad. What else?
- Brad: Local means that the site is not far away.

The 'Notepad' section contains a single bullet point: '• Provides sense of life in our town'. Below the notepad are three icons with labels: 'museum of local history' (blue building icon), 'community market' (green basket icon), and 'electric car factory' (purple car icon).

The 'You:' section contains the following messages:

- Thanks, Brad, but we already know that.
- Sure, why bother taking them far away?
- So it shouldn't take too long to get there and back.
- Well, what you mean by "local" depends on where you are.

A 'Send' button is located at the bottom of the 'You:' section.

<i>Item</i>	CC101103
<i>Credited Response</i>	So it shouldn't take too long to get there and back.
<i>Classification</i>	(C1) Communicating with team members about the actions performed

The credited response helps advance the shared understanding by clarifying one criterion the selected site must meet.

### Part 1 – Sample Screen #4

Regardless of the student response for the previous item, Rachel makes an entry on the notepad and answers by saying, “OK, ‘local’ means you can get there quickly. I’ll put ‘travel time’ on the Notepad. Anything else?”

George responds by bringing up the schedule that must be met. “Ms. Cosmo said that the bus will pick us up at 1:00 PM next Thursday and bring us back by 3:00.”

The screenshot shows the PISA 2015 digital platform interface. At the top, there is a toolbar with icons for navigation and help. The main area is divided into several sections:

- Introduction** and **Part 1 - Directions** buttons.
- Who's in the Chat** section showing participants: You, George, Rachel, Brad.
- Chat History**:
  - Rachel: Good – I'll put that on the Notepad. Anything else?
  - Brad: Local means that the site is not far away.
  - You: So it shouldn't take too long to get there and back.
  - Rachel: OK, “local” means you can get there quickly. I’ll put “travel time” on the Notepad. Anything else?
  - George: Ms. Cosmo said that the bus will pick us up at 1:00 PM next Thursday and bring us back by 3:00.
- Notepad** section with the following text:
  - Provides sense of life in our town
  - Travel time is manageable
- Icons and Labels**:
  - museum of local history (blue square)
  - community market (green square)
  - electric car factory (purple square)
- You:** text input area with the following messages:
  - Are all the sites open then?
  - Good – nobody wants to stay after school.
  - Some kids have afterschool activities.
  - Does that mean we'll have less homework?
- Send** button.

<i>Item</i>	CC101104
<i>Credited Response</i>	Are all the sites open then?
<i>Classification</i>	(C3) Following rules of engagement, (e.g., prompting other team members to perform their tasks)

In this case, the credited response helps move the problem solving process forward, pointing out to the team that they need to be sure the selected site meets the schedule defined by Ms. Cosmo.

### Part 1 – Sample Screen #5

Any selection made by the student is followed by a comment from Brad. He goes off task a bit, saying, “Who cares? All of these choices are boring. Let’s take our visitors someplace they’ll actually enjoy.”

The screenshot shows the PISA 2015 digital task interface. At the top, there are navigation icons: a question mark, a back arrow, a forward arrow, and a search icon. The main area is titled "PISA 2015". On the left, there are two tabs: "Introduction" and "Part 1 - Directions", with "Part 1 - Directions" currently selected. Below the tabs is a "Who's in the Chat" section showing participants: You, George, Rachel, and Brad. The chat log shows the following messages:

- You: "Do it shouldn't take too long to get there and back."
- Rachel: "OK, "local" means you can get there quickly. I'll put "travel time" on the Notepad. Anything else?"
- George: "Ms. Cosmo said that the bus will pick us up at 1:00 PM next Thursday and bring us back by 3:00."
- You: "Are all the sites open then?"
- Brad: "Who cares? All of these choices are boring. Let's take our visitors someplace they'll actually enjoy."

Below the chat log, there is a "You:" section with the following messages:

- You're right, Brad. If none of the choices are any good, let's go somewhere else.
- Brad, you're right that we want them to enjoy themselves, but we should discuss Ms. Cosmo's options first.
- Ms. Cosmo has no idea of what kids like. Rachel, George, do you agree?
- Why don't we take a look at the Town Hall instead?

At the bottom of the interface is a "Send" button.

On the right side of the interface, there is a "Notepad" section with the following text:

- Provides sense of life in our town
- Travel time is manageable

Below the notepad are three icons with labels:

- museum of local history (blue square)
- community market (green square)
- electric car factory (purple square)

Item	CC101105
Credited Response	Brad, you're right that we want them to enjoy themselves, but we should discuss Ms. Cosmo's options first.
Classification	(D1) Monitoring, providing feedback and adapting the team organisation and roles

The credited response acknowledges Brad's statement while reminding him about the team's task, providing feedback to keep the discussion focused.

### Part 1 – Sample Screen #6

Each team member expresses an opinion about the site selection. George states that any site is probably ok, Rachel suggests the museum of local history, and Brad says the museum is boring and that he thinks it is closed.

The screenshot shows a simulated digital environment for a team visit. On the left, a chat window titled 'Who's in the Chat' shows messages from team members: You, George, Rachel, and Brad. The messages are as follows:

- You: Brad, you're right that we want them to enjoy themselves, but we should discuss Ms. Cosmo's options first.
- George: I don't know. Any one of the sites is probably OK.
- Rachel: You know, the museum of local history would really give a sense of life in our town.
- Brad: It's kind of boring. Besides, I think it's closed.

Below the chat, a text input field for 'You:' contains the following responses:

- Does this mean we only have two choices?
- I don't think it's closed. There are ads for the museum all over town.
- Rachel, the museum is open only on weekends. Let's look at the other options.
- I don't see how we can visit the museum if it's closed.

A 'Send' button is located at the bottom of the text input field.

On the right, there is a 'Notepad' section with a yellow background. It contains the following bullet points:

- Provides sense of life in our town
- Travel time is manageable

Below the notepad, there are three icons with labels: 'museum of local history' (blue icon), 'community market' (green icon), and 'electric car factory' (purple icon).

Item	CC101106
Credited Response	<p>The student must click on the museum website, as shown above, in order to receive either full or partial credit.</p> <p>Full credit response: Rachel, the museum is open only on weekends.</p> <p>Let's look at the other options</p> <p>Partial credit response: I don't see how we can visit the museum if it's closed.</p>
Classification	(C1) Communicating with team members about the actions performed

For this item, the student must use the simulated web link in the task area to check when the museum is open and then choose the response that communicates the implications of that information to the team. Therefore, to gain full credit, the student must respond to Rachel's proposal and Brad's misinformation, clarifying that the museum is not open on the day scheduled for the class visit.

### Part 1 – Sample Screen #7

Rachel confirms that the museum is not open on Thursday afternoon (rescuing any students who do not answer the previous item correctly). She adds a note to the notepad that the selected site must be open on Thursdays from 1-3 pm.

The screenshot shows the PISA 2015 digital application interface. At the top, there are navigation icons: a blue bar with a 'PISA 2015' logo, a color calibration bar, a clock, and a question mark icon. Below the bar, a menu bar includes 'Introduction' and 'Part 1 - Directions'. The main area is divided into sections: 'Who's in the Chat' (listing 'You', 'George', 'Rachel', and 'Brad'), a 'Notepad' section, and a list of three options with icons.

**Notepad:**

- Provides sense of life in our town
- Travel time is manageable
- Is open Thursday, 1-3 PM

**Options:**

- museum of local history** (blue icon)
- community market** (green icon)
- electric car factory** (purple icon)

**Chat Log:**

**Rachel:** You know, the museum of local history would really give a sense of life in our town.

**Brad:** It's kind of boring. Besides, I think it's closed.

**You:** Rachel, the museum is open only on weekends. Let's look at the other options.

**Rachel:** Hey, I've checked the museum website – they're NOT open Thursday afternoon. On the notepad, I'll say that the site must be open 1:00-3:00 PM on Thursday.

**You:**

It's a shame that it's closed Thursdays -- it would've been perfect.

George, why haven't you suggested any ideas?

We're wasting time arguing about this. Let's move on.

We should discuss the market and the car factory.

**Send**

<i>Item</i>	CC101107
<i>Credited Response</i>	We should discuss the market and the car factory.
<i>Classification</i>	(C1) Communicating with team members about the actions to be/ being performed

The credited response reminds team members that they have two additional choices to consider, given that the museum is not open on the required day.

### Part 1 – Sample Screen #8

Regardless of the student selection for the previous item, George states that he likes the idea of going to the market.

The screenshot shows a digital interface for a PISA 2015 task. At the top, there are navigation icons for a search bar, back, forward, and refresh. The main area is a chat window titled "Who's in the Chat" with participants: You, George, Rachel, and Brad. The "Notepad" section on the right contains the following bullet points:

- Provides sense of life in our town
- Travel time is manageable
- Is open Thursday, 1-3 PM

The "museum of local history" icon is shown above the list. The chat transcript includes the following messages:

- You: Rachel, the museum is open only on weekends. Let's look at the other options.
- Rachel: Hey, I've checked the museum website – they're NOT open Thursday afternoon. On the notepad, I'll say that the site must be open 1:00-3:00 PM on Thursday.
- You: We should discuss the market and the car factory.
- George: I kind of like the idea of the market. It would be cool to go there.
- You:
  - George, do you really think that anybody would want to go to the market?
  - Well, it would give the visitors a feel for our town.
  - Clearly there's no way we're going to reach an agreement.
  - Yeah, a lot of people do their shopping there.

A "Send" button is located at the bottom of the chat window.

<i>Item</i>	CC101108
<i>Credited Response</i>	Well, it would give the visitors a feel for our town.
<i>Classification</i>	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)

The credited response acknowledges that George's suggestion meets one of the specified criteria.

### Part 1 – Sample Screen #9

Brad proposes the car factory, saying it, too, would give the visitors a great sense of the town – although Rachel disagrees with his statement that it is the town's largest business.

The screenshot shows a digital interface for 'PISA 2015'. At the top, there are navigation icons: a blue bar with a 'PISA 2015' logo, a color calibration bar, and a circular icon. On the right are icons for a question mark, back, forward, and search. The main area has a 'Notepad' section on the right containing a bulleted list of pros for the car factory. Below it are icons for a 'museum of local history', a 'community market', and an 'electric car factory'. The central area is a 'Who's in the Chat' window showing a conversation between 'You', 'George', 'Rachel', and 'Brad'. The messages are as follows:

- George: We should discuss the market and the car factory.
- George: I kind of like the idea of the market. It would be cool to go there.
- You: Well, it would give the visitors a feel for our town.
- Brad: Hey, the car factory would give the visitors a great sense of our town – after all it's our largest business.
- Rachel: Brad, I really think you're exaggerating.

The 'You' section shows responses:

- OK, I'm leaning toward the car factory.
- Let's check with Ms. Cosmo and see what we should do.
- Brad, I agree with Rachel. I think you're exaggerating.
- Brad makes a fair point. Let's compare the car factory with the market.

A 'Send' button is at the bottom of the message area.

<i>Item</i>	CC101109
<i>Credited Response</i>	Brad makes a fair point. How does the car factory compare with the market?
<i>Classification</i>	(C3) Following rules of engagement

The credited response supports Brad's suggestion, promoting group collaboration, and moves the team forward by prompting the team to compare the remaining options.

### Part 1 – Sample Screen #10

George raises a new consideration, noting that the factory is not located near the school.

The screenshot shows the PISA 2015 digital platform. At the top, there are navigation icons: a blue square, a white square, a green square, a yellow square, a blue circle, a question mark icon, a left arrow, and a right arrow. The title 'PISA 2015' is in the top left. A sidebar on the left contains 'Introduction' and 'Part 1 - Directions' buttons. The main area is a 'Who's in the Chat' window showing participants: You, George, Rachel, and Brad. The chat log includes the following messages:

- You: Well, it would give the visitors a boost for our town.
- Brad: Hey, the car factory would give the visitors a great sense of our town – after all it's our largest business.
- Rachel: Brad, I really think you're exaggerating.
- You: Brad makes a fair point. Let's compare the car factory with the market.
- George: Our school is in the middle of town. The factory is kind of far away.

Below the chat log, there is a 'You:' input field with the following messages:

- So much for the car factory.
- We'd better check how long the trip would take.
- We're really not making any progress.
- Is the car factory always open?

A 'Send' button is located at the bottom of the input field. To the right of the chat log, there is a 'Notepad' section with a yellow background. It contains the following list:

- Provides sense of life in our town
- Travel time is manageable
- Is open Thursday, 1-3 PM

Below the notepad, there are three icons with labels:

- museum of local history (blue square)
- community market (green square)
- electric car factory (purple square)

<i>Item</i>	CC101110
<i>Credited Response</i>	We'd better check how long the trip would take.
<i>Classification</i>	(C1) Communicating with team members about the actions performed

The credited response communicates that George's point requires further investigation, keeping the team on task.

## Part 1 – Sample Screen #11

Rachel says that she has checked the car factory website and thinks it would be ok, but asks the team to double check.

**PISA 2015**

**Who's in the Chat**

You George Rachel Brad

**You:** Brad makes a fair point. Let's compare the car factory with the market.

**George:** Our school is in the middle of town. The factory is kind of far away.

**You:** We'd better check how long the trip would take.

**Rachel:** I've looked at the web page for the car factory. I think a visit there would be OK, but could you guys double check to see if there's a problem?

**You:**

Rachel thinks the factory is OK, so let's decide between the factory and the market.

The factory has guided tours, so that could be interesting.

According to the web page the factory is about 45 minutes from the school.

There's not enough time to get there and back and have everyone take the tour.

**Send**

**Notepad**

- Provides sense of life in our town
- Travel time is manageable
- Is open Thursday, 1-3 PM

**Location:** 45 minutes from town at the intersection of Highway 13 and Highway 26

**Hours open to the public:** Monday through Friday, 2:00 p.m. to 5:00 p.m.

**Guided tours:** Learn about electric cars and see how they're made!

- A one-hour tour starts at 2:00, 3:00, and 4:00 p.m.
- Maximum group size is 15 per tour.
- The tour is free, but reservations are suggested.

<b>Item</b>	CC101111
<b>Credited Response</b>	Student must click on car factory website in order to receive credit for this response: There's not enough time to get there and back and have everyone take the tour.
<b>Classification</b>	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)

The credited response recognises that the thirty visitors will need to be divided into two tour groups (since the maximum size of a tour group at the factory is 15) This implies that there will have to be two consecutive tours. The need to have two tours, combined with the bus schedule means that the factory fails to meet the constraints set by Ms. Cosmo.

### Part 1 – Sample Screen #12

George provides the needed information about the time required for a visit to the car factory. Rachel expresses that she is losing track of the details that have been discussed to this point.

The screenshot shows a digital interface for a PISA 2015 task. At the top, there are navigation icons for back, forward, and search, along with a 'PISA 2015' logo and a progress bar with five green squares. The main area is divided into sections:

- Chat Window:** Shows a conversation between 'You', 'George', 'Rachel', and 'Brad'. Rachel says she looked at the web page for the car factory and thinks a visit would be OK. George says visiting would take three hours, half on the bus. Rachel expresses concern about losing track of details. You suggest collecting more information, summarizing findings, and慎重地 (carefully) choosing a site.
- Notepad:** A yellow sticky note with the following text:
  - Provides sense of life in our town
  - Travel time is manageable
  - Is open Thursday, 1-3 PM
- Sidebar:** Icons for 'museum of local history' (blue building), 'community market' (green basket), and 'electric car factory' (purple car with plug).
- Information Box:** A purple-bordered box containing details about the electric car factory:
  - Location:** 45 minutes from town at the intersection of Highway 13 and Highway 26
  - Hours open to the public:** Monday through Friday, 2:00 p.m. to 5:00 p.m.
  - Guided tours:** Learn about electric cars and see how they're made!
    - One-hour tour starts at 2:00, 3:00, and 4:00 p.m.
    - Maximum group size is 15 per tour.
    - The tour is free, but reservations are suggested.

Item	CC101112
Credited Response	We should summarize what we've found out about each site.
Classification	(C2) Enacting plans (C3) Following rules of engagement

The credited response focuses on summarising the team's discussion to reach a final choice.

### Part 1 – Sample Screen #13

The student is tasked with summarising what the team has learned about the sites and making a recommendation. The chat history is available to review as is the information from the website for the museum, market and car factory.

The screenshot shows a digital interface for a collaborative problem-solving task. At the top, there are tabs for 'Introduction' and 'Part 1 - Directions'. The 'Part 1 - Directions' tab is active, displaying instructions: 'The team has asked you to record what it has learned about each site and make a recommendation based on that information.' Below this are three bullet points: 'Complete the table by clicking on the appropriate boxes.', 'Click on the site to recommend for the visit.', and 'When you are finished, click on Send.' To the right of these instructions is a 'Notepad' section with a yellow background containing a bulleted list: 'Provides sense of life in our town', 'Travel time is manageable', and 'Is open Thursday, 1-3PM'. Below the instructions is a 'Hours' section with details: 'Location: 101 Main Street, in the center of town', 'Hours: Saturday, 10 a.m.-5 p.m., Sunday Noon-5 p.m.', and 'On Display: Our town's history and heritage can be seen in the following exhibits: Clothing, furniture, and room decorations from different periods; Antiques donated by generations of local families; Maps showing the growth of the town and surrounding areas'. At the bottom left is a 'Chat' window showing a conversation between 'George', 'You', and 'Rachel'. On the right is a 'SEND' button and a table for summarizing site information.

**Notepad**

- Provides sense of life in our town
- Travel time is manageable
- Is open Thursday, 1-3PM

**Hours**

Location: 101 Main Street, in the center of town

Hours: Saturday, 10 a.m.-5 p.m., Sunday Noon-5 p.m.

On Display: Our town's history and heritage can be seen in the following exhibits:

- Clothing, furniture, and room decorations from different periods
- Antiques donated by generations of local families
- Maps showing the growth of the town and surrounding areas

**Chat**

George: Our school is in the middle of town. The factory is kind of far away.

You: We'd better check how long the trip would take.

Rachel: I've looked at the web page for the car factory. I think a visit there would be OK, but could you guys double check to see if there's a problem?

You: There's not enough time to get there and back and have everyone take the tour.

George: Visiting the factory would take three hours, half of it on the bus.

Rachel: Where does that leave us? I'm starting to lose track of the details.

You: We should summarize what we've found out about each site.

**SEND**

To: Team

From: You

Subject: Our choice for class visit

**Team:**  
Here's what we found out about the sites:

Site	Museum	Market	Factory
Gives a sense of town life	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Is open when needed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Can be visited in two hours	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

We should tell Ms. Cosmo that we recommend visiting the following site:

the museum of local history

the community open-air market

the electric car factory

Thanks, guys!

Item	CC101113
Credited Response	On the table: all 3 boxes checked for the Market and 5 of the 6 buttons correctly checked for the Factory and Museum Radio buttons: Community open-air market selected
Classification	(C2) Enacting plans (C3) Following rules of engagement

## Part 2: Overview

The opening screen of Part 2 presents an email from the faculty advisor, Ms. Cosmo. She presents an overview of the task and defines the key roles.

The screenshot shows a digital assessment interface for 'The Visit - Part 2'. The top bar is blue with the text 'PISA 2015' on the left and various icons (calculator, ruler, magnifying glass, etc.) on the right. The main window has a light blue header bar with the title 'The Visit - Part 2' and a sub-header 'Introduction'. Below this, a text box contains the following instructions: 'Read the introduction. Then click on the NEXT arrow.' The main content area displays an email message from Ms. Cosmo. The email details are as follows:

You have received the following email message from Ms. Cosmo:

To: You  
From: Ms.Cosmo  
Subject: Assigning Guides to Visitors

Thanks for recommending a place for our class visit. While the visiting students are at our school they will need guides to help them find their way around, understand what's expected of them, and generally have a positive experience.

Since you took the lead in planning the outing, you don't need to be a guide. Please let George take the lead in suggesting assignments but give him any help he might need.

On the next screen, you will see some instructions to help you with this assignment.

## Part 2: Directions

The directions for Part 2 summarise the key criteria that need to be considered when selecting the student-visitor groupings.

- Each team member can act as a guide to a maximum of three visitors
- Each visitor must be assigned to a guide who has studied the visitor's native language
- Guides must be of equal or higher class rank than the visitors assigned to them

The advisor also mentions that it would be desirable to match visitors and guides with respect to outside interests and favorite subjects, but that this is not a requirement.

Note that the attributes for the guides and visitors are such that there are multiple assignment possibilities that will fulfill the three essential conditions.

On the right side of the screen, the table shown below displays. Over the course of the chat, as new information is added and assignments are proposed, the display reflects that conversation.

The screenshot shows a digital interface for the PISA 2015 collaborative problem-solving task. The top bar includes the PISA 2015 logo, a toolbar with icons for back, forward, and search, and a question mark icon. The main area is divided into two main sections: 'Part 2 - Directions' on the left and a table on the right.

**Part 2 - Directions:**

- Help George assign visitors to himself, Rachel and Brad. There are 8 visitors who don't have guides. Their names and some information about them are shown on the right.
- Ms. Cosmo has given you the following instructions:
  - "Make sure that every visitor has a guide who has studied that visitor's native language. We also don't want any visitors to be guided by someone from a lower year than they are in. And no one should be a guide to more than three visitors."
  - "It would be good if you could match the interests of guides and visitors, but that's not absolutely necessary."
- You and your teammates can use the chat and the information about the visitors and guides on the right to decide which visitors should be assigned to George, Rachel and Brad. As you discuss possible assignments in the chat, the visitors will be sorted under the guides they are assigned to.

**Click Here to Continue**

**Guides Table:**

Guides		
George	Rachel	Brad
2nd year Interest: Sports	2nd year Interest: Movies	1st year Interest: Computer Games

**Visitors Table:**

Visitors		
Francoise 1st Year Interest: Sports Language: French	Raul 1st Year Interest: Computer Games Language: Spanish	Helene 1st Year Interest: Sports Language: French
Pablo 2nd Year Interest: Computer Games Language: Spanish	Zhang 1st Year Interest: Movies Language: Mandarin	Sara 1st Year Interest: Movies Language: Spanish
Yao 2nd Year Interest: Movies Language: Mandarin	Gerard 1st Year Interest: Computer Games Language: French	

## Part 2 – Sample Screen #1

<i>Item</i>	CC101201
<i>Credited Response</i>	<p>Full credit: It would help to know what languages each of you has studied.</p> <p>Partial credit: George, before you suggest some assignments, can you tell everyone what languages you have studied?</p> <p>Partial credit: Rachel and Brad, what languages have you studied?</p>
<i>Classification</i>	(A1) Discovering perspectives and abilities of team members

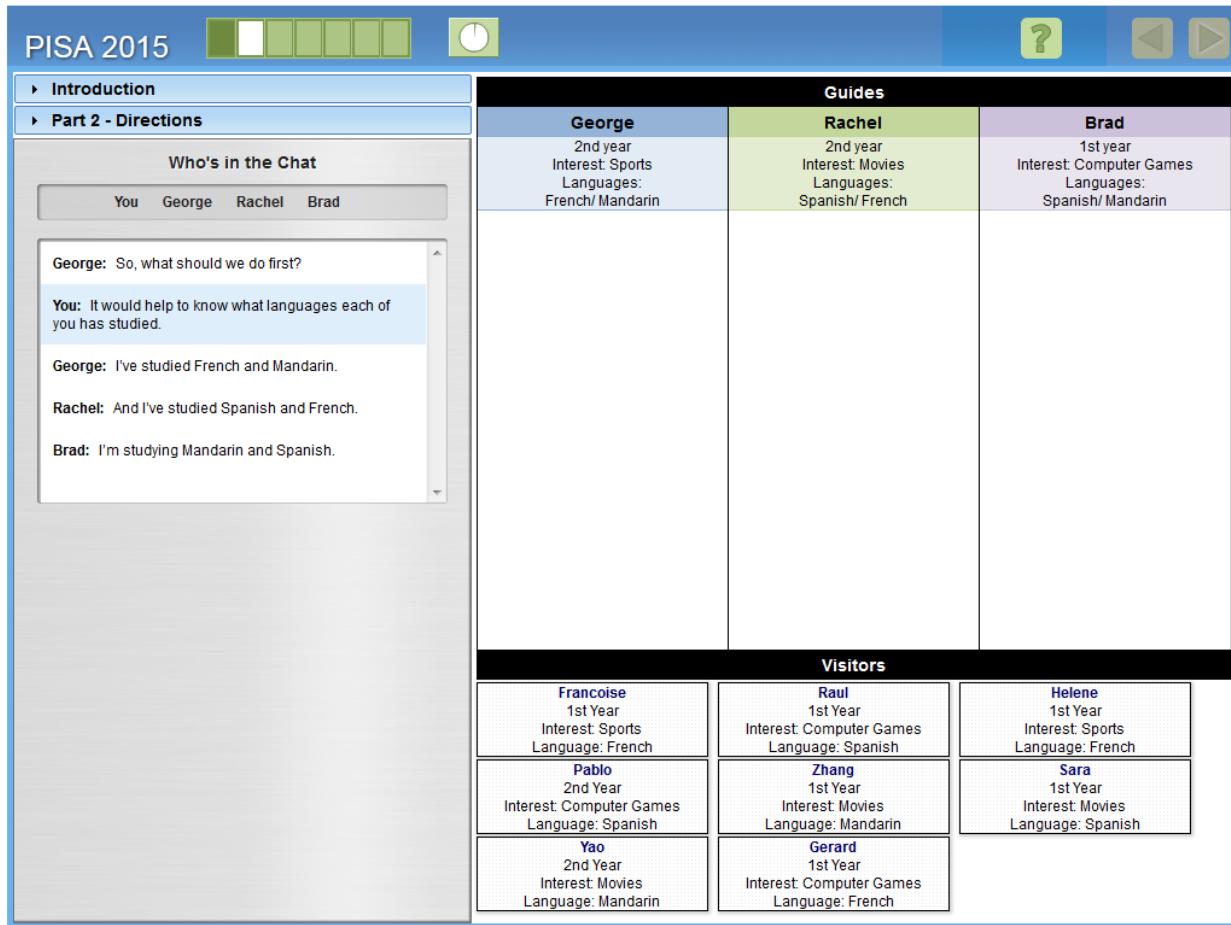
Credited responses focus on collecting information about team members' language experience, as guides need to have studied the language(s) of their assigned visitors. The full credit response focuses on all 3 team members; partial credit responses focus just on George or just on Rachel and Brad.

Item associated with alternate path:

While the first option does not move the problem solving forward, it does restate information provided by Ms. Cosmo. If the student selects the first option, George delivers a partial rescue by mentioning his own language abilities. The student then has a second opportunity to suggest that the team provide information about language skills (**item 202**) with chat options similar to those presented in item 201.

## Part 2 – Sample Screen #2

Each team member specifies the language(s) he or she has studied and these display under their names, along with their class year and interests.



The screenshot shows a digital interface for the PISA 2015 "The Visit" activity. The top navigation bar includes the PISA 2015 logo, a color palette, and a clock icon. On the right are buttons for help, back, forward, and exit. The main area is divided into sections: "Who's in the Chat" (listing You, George, Rachel, Brad), "Guides" (listing George, Rachel, Brad with their details), and "Visitors" (listing Francoise, Raul, Helene, Pablo, Zhang, Sara, Yao, Gerard, and their details). The "Who's in the Chat" section contains a chat log where users discuss their language studies.

Guides		
<b>George</b> 2nd year Interest: Sports Languages: French/ Mandarin	<b>Rachel</b> 2nd year Interest: Movies Languages: Spanish/ French	<b>Brad</b> 1st year Interest: Computer Games Languages: Spanish/ Mandarin

Visitors		
Francoise 1st Year Interest: Sports Language: French	Raul 1st Year Interest: Computer Games Language: Spanish	Helene 1st Year Interest: Sports Language: French
Pablo 2nd Year Interest: Computer Games Language: Spanish	Zhang 1st Year Interest: Movies Language: Mandarin	Sara 1st Year Interest: Movies Language: Spanish
Yao 2nd Year Interest: Movies Language: Mandarin	Gerard 1st Year Interest: Computer Games Language: French	

**Who's in the Chat**

You George Rachel Brad

**George:** So, what should we do first?

**You:** It would help to know what languages each of you has studied.

**George:** I've studied French and Mandarin.

**Rachel:** And I've studied Spanish and French.

**Brad:** I'm studying Mandarin and Spanish.

### Part 2 – Sample Screen #3

George suggests visitor assignments and these display under each team member's name. Rachel points out that Brad might have difficulty guiding 3 visitors.

The screenshot shows a digital application interface for 'PISA 2015'. The top navigation bar includes 'Introduction', 'Part 2 - Directions', a 'Who's in the Chat' section, and a 'Guides' section. The 'Guides' section is divided into three columns: George (2nd year, Interest: Sports, Languages: French/ Mandarin), Rachel (2nd year, Interest: Movies, Languages: Spanish/ French), and Brad (1st year, Interest: Computer Games, Languages: Spanish/ Mandarin). The 'Visitors' section lists six visitors: Yao (2nd year, Interest: Movies, Language: Mandarin), Francoise (1st Year, Interest: Sports, Language: French), Helene (1st Year, Interest: Sports, Language: French), Pablo (2nd Year, Interest: Computer Games, Language: Spanish), Gerard (1st Year, Interest: Computer Games, Language: French), and Zhang (1st Year, Interest: Movies, Language: Mandarin). The 'Who's in the Chat' section shows a conversation between Brad, George, Rachel, and Brad. Brad says, 'I'm studying Mandarin and Spanish.' George responds, 'So, now that we know about languages., how would it be if I was guide for Yao and Helene? Rachel, you could be guide to Francoise, Pablo and Gerard. Brad, you could be guide to Zhang, Raul, and Sara.' Rachel replies, 'I think Brad might have a hard time being guide to three visitors. George, couldn't you take care of Zhang too?' Brad responds, 'I think I can do it, Rachel. How hard can it be?' The 'You' section shows a message from Rachel: 'Sorry, Brad, I think that Rachel is right. We shouldn't have a first-year student being guide to three visitors.' Another message from Rachel follows: 'Rachel, Ms. Cosmo asked George to suggest assignments. Are you OK with the ones he suggested for you?' A third message from Rachel is: 'Rachel, George is the one suggesting assignments right now.' A final message from Rachel is: 'Good thinking, Rachel.' A 'Send' button is at the bottom of the chat area.

Item	CC101203
Credited Response	Rachel, Ms. Cosmo asked George to suggest assignments. Are you OK with the ones he suggested for you?
Classification	(C3) Following rules of engagement

The credited response prompts the team to respect Ms. Cosmo's assignment of George as the leader for this task.

#### Items associated with alternate paths:

If the student selects the first option, George rescues by stating that, "That's not one of the rules Ms. Cosmo gave us.". The student then has a second chance to ask Rachel if she is ok with George's choices (**item 204**).

If the student selects the third option, Rachel rescues by acknowledging that George should make the assignments. The student then has a second chance to ask Rachel if she is ok with George's choices (**item 205**).

### Part 2 – Sample Screen #4

Rachel agrees to the visitors she was assigned and Brad agrees that he can act as a guide to two, rather than three, visitors but thinks that he would be a better match for Pablo and Raul based on languages and interests. The display of assignments changes accordingly.

The screenshot shows a digital application interface for PISA 2015. The top bar includes a logo, a progress bar with five green squares, a clock icon, and navigation buttons for help, back, forward, and exit. The main area is divided into sections: 'Who's in the Chat' (listing You, George, Rachel, Brad), a large text box for conversation, and 'Guides' and 'Visitors' sections.

**Guides Section:**

Guide	Year	Interest	Languages
George	2nd year	Sports	French/ Mandarin
Rachel	2nd year	Movies	Spanish/ French
Brad	1st year	Computer Games	Spanish/ Mandarin
Yao	2nd Year	Movies	Mandarin
Francoise	1st Year	Sports	French
Helene	1st Year	Sports	French
Gerard	1st Year	Computer Games	French
Raul	1st Year	Computer Games	Spanish
Pablo	2nd Year	Computer Games	Spanish

**Visitors Section:**

Visitor	Year	Interest	Languages
Sara	1st Year	Movies	Spanish
Zhang	1st Year	Movies	Mandarin

**Chat Conversation:**

**You:**

- I don't see why not.
- OK, Ms. Cosmo did say we should help the visitors have a positive experience and this might really improve Pablo's.
- But Pablo's older than Brad.
- I can see you all like the idea, but Ms. Cosmo told us we can't have a first year student as a guide for a second-year visitor.

**Send**

Item	CC101206
Credited Response	I can see you all like the idea, but Ms. Cosmo told us we can't have a first year student as a guide for a second-year visitor.
Classification	(D1) Monitoring and repairing the shared understanding

The credited response reminds the team about Ms. Cosmo's requirement that guides must be of equal or higher class rank than the visitors assigned to them, helping to ensure that the assignments meet the specified criteria.

If a student selects one of the first two responses, Rachel rescues, saying “Well, we forgot that Brad is a first year and Pablo is a second-year. It won't work.”

Item associated with alternate path:

If student selects the third option, Brad asks why that matters and the student has a second chance to remind the team that a first year student cannot act as a guide for a second year visitor (**item 207**).

## Part 2 – Sample Screen #5

Brad says he didn't realise that Pablo was a second-year student and George suggests the team go with his original suggestion.

The screenshot shows a digital interface for the PISA 2015 collaborative problem solving task. The top navigation bar includes 'PISA 2015', a color palette, and icons for help, back, and forward. The main area is divided into sections: 'Who's in the Chat', 'Guides', and 'Visitors'.

**Who's in the Chat:**

- Participants: You, George, Rachel, Brad.
- George: I guess so.
- Rachel: Maybe it's a good idea. Pablo might relate better to Brad, since they have the same interests.
- You: I can see you all like the idea, but Ms. Cosmo told us we can't have a first year student as a guide for a second-year visitor.
- Brad: OK, I didn't notice he was a second year student.
- George: So, let's go with my original suggestion?

**Guides:**

Guide	Year	Interest	Languages
George	2nd year	Sports	French/ Mandarin
Rachel	2nd year	Movies	Spanish/ French
Brad	1st year	Computer Games	Spanish/ Mandarin
Yao	2nd Year	Movies	Language: Mandarin
Francoise	1st Year	Sports	French
Helene	1st Year	Sports	French
Pablo	2nd Year	Computer Games	Spanish
Gerard	1st Year	Computer Games	French
Zhang	1st Year	Movies	Mandarin
Raul	1st Year	Computer Games	Spanish
Sara	1st Year	Movies	Spanish

**Visitors:**

None listed.

**Text Input:**

- You: Good idea. Let's get this done.
- You: Are you OK with George's idea, Brad?
- You: Can you make another suggestion, George? I think other possibilities might work.

**Send** button.

Item	CC101208
Credited Response	Are you OK with George's idea, Brad?
Classification	(D2) Monitoring results of actions and evaluating success in solving the problem

The credited response prompts one team member to confirm another's suggestion.

## Part 2 – Sample Screen #6

The team members continue to discuss the selections, finally agreeing with George's plan. George notes that this task took longer than necessary and wonders how the team could do better next time.

The screenshot shows a digital application interface for 'PISA 2015'. At the top, there are navigation icons: a magnifying glass, a left arrow, a right arrow, and a refresh symbol. The main title 'PISA 2015' is on the left, and the sub-section 'Part 2 - Directions' is highlighted in blue. Below this, a 'Who's in the Chat' section shows four participants: You, George, Rachel, and Brad. The 'You' section contains a scrollable list of messages:

- Brad: But you know, I could use some more language practice. Maybe I could guide all the Spanish and Mandarin speakers.
- Rachel: No, that won't work! We aren't supposed to guide more than 3 visitors each. Let's stick to George's plan.
- Brad: OK, OK. George's plan is fine, I guess.
- George: Well, that seemed to take longer than it should have. What could we do better next time?

Below the chat is a 'You:' section with four options:

- Maybe we could respond to each other faster.
- Maybe we should pay more attention to what Ms. Cosmo required.
- Maybe we should be clearer about our own preferences.
- Maybe we need to be more flexible and consider more alternatives.

A 'Send' button is located at the bottom of this section. To the right, there is a 'Guides' section with three columns:

George	Rachel	Brad
2nd year Interest: Sports Languages: French/ Mandarin	2nd year Interest: Movies Languages: Spanish/ French	1st year Interest: Computer Games Languages: Spanish/ Mandarin
Yao 2nd Year Interest: Movies Language: Mandarin	Francoise 1st Year Interest: Sports Language: French	Zhang 1st Year Interest: Movies Language: Mandarin
Helene 1st Year Interest: Sports Language: French	Pablo 2nd Year Interest: Computer Games Language: Spanish	Raul 1st Year Interest: Computer Games Language: Spanish
	Gerard 1st Year Interest: Computer Games Language: French	Sara 1st Year Interest: Movies Language: Spanish

A black bar labeled 'Visitors' is positioned below the guides. The entire application has a light blue background.

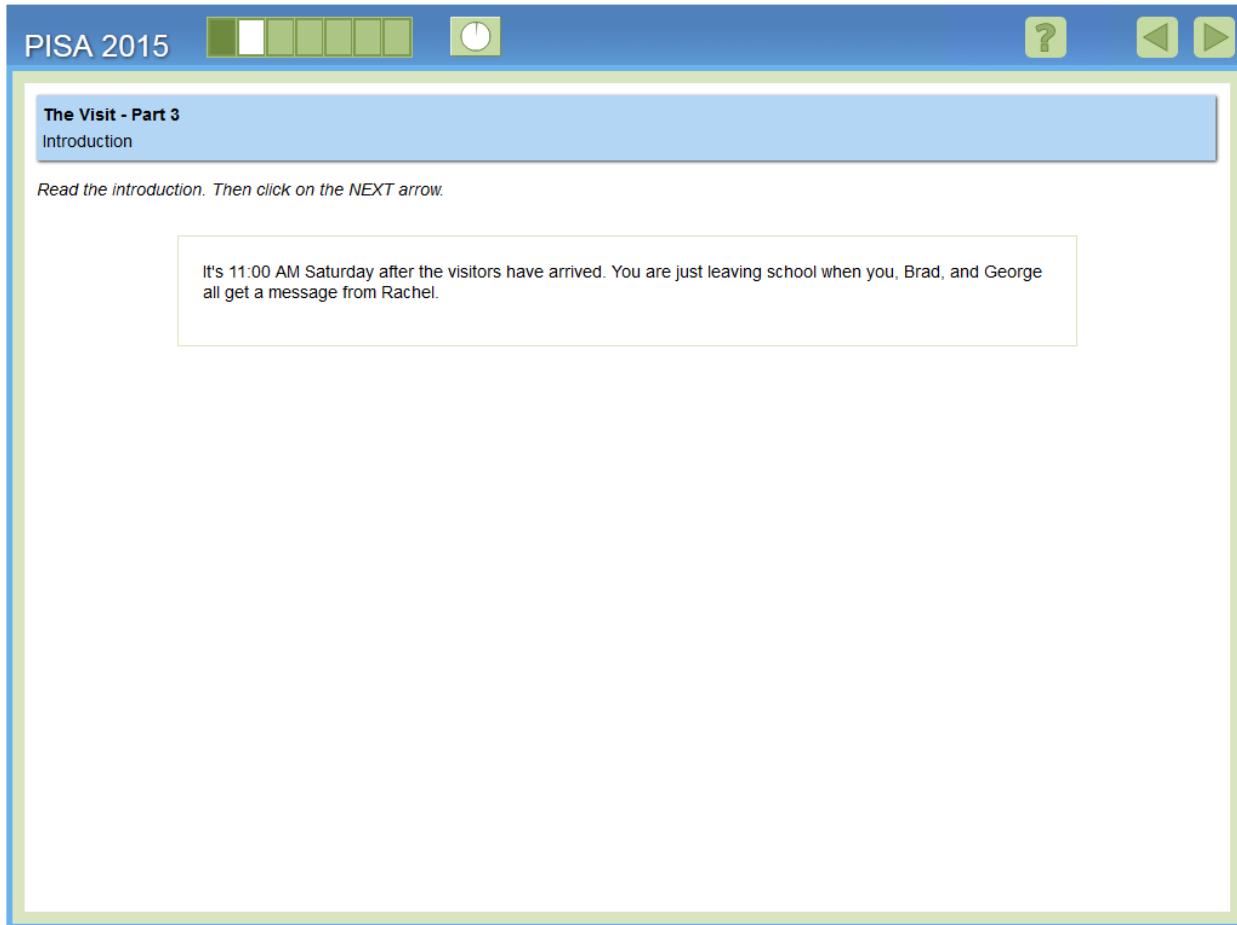
Item	CC101209
Credited Response	Maybe we should pay more attention to what Ms. Cosmo required.
Classification	(D3) Monitoring, providing feedback and adapting the team organisation and roles

The credited response allows the student to reflect on the process and affirm the importance of attending to provided criteria in order to efficiently solve the problem.

If a student selects one of the other options, George concludes part 2, saying, "Well, at least we could agree. I'm looking forward to meeting them."

**Part 3: Overview**

Part 3 focuses on the task of helping one of the visitors who needs to return home unexpectedly. The previously-made arrangements for taking the visitor to the airport have been upset and the student and agents must intervene. The team must first share information regarding the whereabouts of the visitor and attempt to rendezvous with him and, if possible, locate his lost mobile phone. After the rendezvous, the student and the agents must collaborate to determine the best way to get the visitor to the airport, subject to various constraints.



The screenshot shows the PISA 2015 digital task interface. At the top, there is a blue header bar with the text "PISA 2015" on the left, a set of five colored squares (dark green, white, light green, light blue, and light yellow) in the center, and three icons on the right: a question mark, a left arrow, and a right arrow. Below the header is a light blue navigation bar with the text "The Visit - Part 3" and "Introduction". A sub-instruction "Read the introduction. Then click on the NEXT arrow." is displayed in a box. The main content area contains a text box with the following message: "It's 11:00 AM Saturday after the visitors have arrived. You are just leaving school when you, Brad, and George all get a message from Rachel."

### Part 3: Directions

The directions specify the team's task: to help one of the visitors return home. The information that will display in the task area is also explained: locations of the team members will be shown, the clock will show the time, and notepad will display important information.

PISA 2015

Introduction

Part 3 - Directions

In this part you will help a visitor return home. On the right side of the screen you will see various locations that you and your teammates will discuss in the chat. The time it takes to move between locations is shown next to the arrows.

As you use the chat to decide which location you and your teammates will go to, a symbol will display at the location and the clock will shift to reflect the time it took to get to that location.

You and your teammates can use the following features:

- chat to discuss the best way to help the visitor to return home
- notepad to keep track of important information
- clock to show you the time that has passed

Click Here to Continue

11:00 AM

Notepad

You

School

### Part 3 – Sample Screen #1

Rachel's message displays and sets out the basics of the problem to be solved by the team.

**PISA 2015**

Introduction

Part 3 - Directions

Who's in the Chat

You Brad Rachel George

Rachel: Hi, did you hear that Zhang has to return home early? His host family is supposed to pick him up at the main entrance of the school and drive him to the airport, but they can't make it. He's supposed to meet them at 11:15, but I'm pretty sure they won't be there. What should we do?

You:

What happened to his host family?

You're good at arranging things, Rachel, can you take care of Zhang?

I'm at school now, where are you guys?

I'm not sure I'm the best person to decide. Rachel, can you help Zhang?

Send

11:00 AM

Notepad

School

Item	CC101301
Credited Response	I'm at school now, where are you guys? (full credit)
Classification	(B3) Describing roles and team organisation (communication protocol/rules of engagement)

The credited response focuses the team on the first task, determining where everyone is.

Items associated with alternate paths:

- If the student selects the first option, Rachel rescues saying she doesn't know what happened to his host family and asking if you are at school. The student has a second chance to respond about his or her location: "I'm at school, where are you?" (**Item 302** – partial credit)
- If the student selects the second or fourth options, Rachel says she is at home. The student can respond by asking where everyone else is. (**Item 303** – partial credit)

### Part 3 – Sample Screen #2

Regardless of the path taken, Brad joins in, saying he is at the school and his icon displays in the task area.

The screenshot shows the PISA 2015 digital task interface for Part 3. The top navigation bar includes a progress bar with green and yellow segments, a clock icon, and a help icon. The left sidebar has sections for 'Introduction' and 'Part 3 - Directions'. The main area has a 'Who's in the Chat' section showing messages from 'You', 'Brad', 'Rachel', and 'George'. The 'You' section contains messages: 'Hi Brad, why don't you meet Zhang and figure out what happened to his host family?', 'We should call Zhang's mobile phone.', and 'George, can you get here before 11:15?'. A 'Send' button is at the bottom. The central workspace shows a clock at '11:00 AM' and a 'School' icon with two student icons labeled 'Brad' and 'You'. A 'Notepad' area is also visible.

Item	CC101304
Credited Response	Full credit: We should call Zhang's mobile phone. Partial credit: Hi Brad, why don't you meet Zhang and figure out what happened to his host family?
Classification	(A1) Discovering perspectives and abilities of team members

Item associated with alternate path:

If the student selects the third option, George says he can't get to school until 11:30 and the student has a second chance to suggest they try to call Zhang on his cell phone (**item 305**).

### Part 3 – Sample Screen #3

George lets the team know that Zhang lost his cell phone and is trying to find it.

The screenshot shows the PISA 2015 interface for Part 3 - Directions. The top navigation bar includes 'PISA 2015', a color palette, and icons for help, back, and forward. The left sidebar has 'Introduction' and 'Part 3 - Directions' sections, with 'Part 3 - Directions' currently selected. The main area shows a 'Who's in the Chat' list with 'You', 'Brad', 'Rachel', and 'George'. A chat window displays the following messages:

- Rachel: I'm at home.
- George: I'm at home too. I probably can't get there before 11:30.
- Brad: I'm here at school, just coming up to the front entrance.
- You: We should call Zhang's mobile phone.
- George: I talked to Zhang earlier this morning and he's lost his mobile phone. He's probably trying to find it.

The 'You:' section contains the following responses:

- I guess Brad and I can just wait and see if he shows up here at 11:15.
- This is a real mess.
- What should we do?
- Where do you think he could be?

A 'Send' button is at the bottom of the 'You:' section. To the right, a 'Notepad' window is open with a yellow background. A clock shows '11:00 AM' and a map indicates 'School' with two figures labeled 'Brad' and 'You' standing near a building.

Item	CC101306
<i>Credited Response</i>	Two responses are equally credited: What should we do? Where do you think he could be?
<i>Classification</i>	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)

Each of credited responses will elicit an idea from George about how the team should proceed.

## Part 3 – Sample Screen #4

George suggests that Zhang is trying to find his phone.

PISA 2015

Introduction

Part 3 - Directions

Who's in the Chat

You Brad Rachel George

You: We should call Zhang's mobile phone.

George: I talked to Zhang earlier this morning and he's lost his mobile phone. He's probably trying to find it.

You: Where do you think he could be?

George: Zhang's probably looking for his phone at the Internet Cafe or the Food Court at the mall. He's really going to need his phone for the trip home.

You:

Brad, why don't you go look for Zhang at the Food Court and I'll go to the Internet Cafe.

Brad, why don't you go look for Zhang at the Internet Cafe and I'll go to the Food Court.

Brad, why don't you wait here for Zhang, while I go to the Internet Cafe and then the Food Court?

Brad, let's just wait here until 11:15.

**Send**

Notepad

11:00 AM

Item	CC101307
Credited Response	Full credit: Brad, why don't you wait here for Zhang, while I go to the Internet Cafe and then the Food Court? Partial credit: Brad, let's just wait here until 11:15.
Classification	(C2) Enacting plans

**Items 308 – 311** are associated with a series of alternate actions taken by the student, George and Brad as they decide who should go where to try and find Zhang and his phone.

## Part 3 – Sample Screen #5

Regardless of the path taken, Zhang ends up at the school and his phone is located. George brings up a new aspect of the problem – Zhang has missed his ride and needs to get to the airport.

PISA 2015

Introduction

Part 3 - Directions

Who's in the Chat

You Brad Rachel George

Brad: Oh, we're here. He couldn't find his phone either. We'll wait for you at school.

You: I'm coming back now. I found Zhang's phone.

Brad: Great! Zhang's right here. I'll tell him. See you soon.

George: Hi there! I tried calling Zhang's host family on my way here and they are not answering their phone.

George: Well, it looks like Zhang missed his ride. He should take a taxi to the airport.

You:

He didn't miss it. They never came.

Maybe his host family will show up soon. We should wait here because this is where they expect to find him.

Maybe he should, but a taxi will be expensive. Brad, does he have enough money?

You're right, George. They aren't here.

**Send**

Notepad

11:45 AM

Zhang Brad You George

School

Food Court

Internet Cafe

Item	CC101312
Credited Response	Maybe he should, but a taxi will be expensive. Brad, does he have enough money?
Classification	(C2) Enacting plans

The credited response raises a question that the team must take into account when considering transportation options.

Item associated with alternate path:

If the student selects the first or second options, Brad reports that Rachel said the host family wasn't coming and George raises the point that a taxi could be expensive. If the student selects the last option, George mentions that a taxi could be expensive. The student has a second chance to ask if Zhang has enough money for a taxi (item 313).

**Part 3 – Sample Screen #6**

Brad shares the information that Zhang does not have enough money for a taxi.

The screenshot shows the PISA 2015 digital task interface. At the top, there are navigation icons for 'Introduction' and 'Part 3 - Directions'. The main area is titled 'Who's in the Chat' and shows participants: You, Brad, Rachel, and George. The chat log includes the following messages:

- George: I'm there. I tried calling Zhang's host family on my way here and they are not answering their phone.
- George: Well, it looks like Zhang missed his ride. He should take a taxi to the airport.
- You: Maybe he should, but a taxi will be expensive. Brad, does he have enough money?
- Brad: Zhang only has a little money, not nearly enough for a taxi.
- George: What should we do?

The 'You:' section contains the following input fields:

- Let's wait for his host family.
- What time is his flight?
- What do you think we should do, George?

A 'Send' button is located below these fields. To the right, there is a 'Notepad' window and a map of a school campus. The map shows the 'School' building, a 'Food Court' with a spoon and fork icon, and an 'Internet Cafe' with a coffee cup and signal icon. Arrows indicate distances of '15 minutes' between the School and each of the other locations. The time '11:45 AM' is displayed in a red box at the top of the map.

<i>Item</i>	CC101314
<i>Credited Response</i>	What time is his flight?
<i>Classification</i>	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)

The credited response focuses the team on key information needed to solve the problem.

If the first option is selected, George rescues by asking how long the team should wait.

Selecting the third option leads to Brad's comment, shown on the following page.

**Part 3 – Sample Screen #7**

Brad provides information about when Zhang's flight is scheduled to leave.

The screenshot shows the PISA 2015 digital task interface. At the top, there are navigation icons for 'Introduction' and 'Part 3 - Directions'. The main area is a 'Who's in the Chat' window showing a conversation between four participants: You, Brad, Rachel, and George. The conversation is as follows:

- You: Maybe he should, but a taxi will be expensive. Brad, does he have enough money?
- Brad: Zhang only has a little money, not nearly enough for a taxi.
- George: What should we do?
- You: What time is his flight?
- Brad: His flight is at four PM.

Below the chat, the student's responses are listed:

- You: So what other ways are there to get to the airport?
- You: That's plenty of time.
- You: Well we could wait for a while anyway.
- You: Maybe we should try calling his host family again.

A 'Send' button is located at the bottom of this list. To the right of the chat window is a 'Notepad' window, which is currently empty. Below the chat window is a map of a school campus. The map shows the 'School' building, a 'Food Court' with a fork and knife icon, and an 'Internet Cafe' with a coffee cup and Wi-Fi icon. Arrows indicate travel times: 15 minutes from the School to the Food Court, 15 minutes from the School to the Internet Cafe, and 15 minutes from the Food Court to the Internet Cafe. The current time is 11:45 AM.

<i>Item</i>	CC101315
<i>Credited Response</i>	So what other ways are there to get to the airport?
<i>Classification</i>	(B1) Building a shared representation and negotiating the meaning of the problem (common ground)

The credited response helps formulate the problem by asking the team to consider the range of transportation options.

If the student selects any of the other options, George rescues by saying, "We should think of other ways for Zhang to get to the airport."

## Part 3 – Sample Screen #8

Brad says that Zhang could take the bus or train, but they are slower. The clock updates to 12:00 and the train station and bus station icons display.

The screenshot shows the PISA 2015 digital task interface for Part 3. The top navigation bar includes 'PISA 2015' and a color calibration bar. The left sidebar has 'Introduction' and 'Part 3 - Directions' sections. The main area shows a 'Who's in the Chat' list with 'You', 'Brad', 'Rachel', and 'George'. The chat history includes messages from George, You, Brad, and George. The clock shows '12:00 PM' with a red border. To the right are icons for 'Train Station' and 'Bus Station'. A 'Notepad' window is open. Below the clock is a map of a school campus with four locations: 'School' (a person at a desk), 'Food Court' (fork and knife icon), and 'Internet Cafe' (coffee cup icon). Arrows between the Food Court and Internet Cafe indicate a 15-minute walk. Zhang, Brad, You, and George are shown as figures on the map.

Item	CC101316
Credited Response	How many hours before his flight should he get to the airport?
Classification	(D1) Monitoring and repairing the shared understanding

The credited response to this item advances the shared understanding of the group by seeking a clarification of the actual time constraints.

## Part 3 – Sample Screen #9

Brad says that Zhang needs to arrive at the airport at least two hours before his flight.

PISA 2015

Introduction

Part 3 - Directions

Who's in the Chat

You Brad Rachel George

Brad: He could take the bus or the train, but they are a lot slower than a taxi.

You: How many hours before his flight should he get to the airport?

Brad: Well, he needs to get there at least two hours before the flight.

George: I took the bus to airport once and it took an hour and a half. I'm sure the train is faster, so either way is good.

You:

It's Zhang's choice then.

I think we have a plan.

We should check the schedules.

How far away from here are the bus and train stations? Does anybody know?

Send

Train Station

Bus Station

Notepad

12:00 PM

Zhang Brad You George

School

Food Court

Internet Cafe

Item	CC101317
Credited Response	<p>Two equally credited responses:</p> <p>How far away from here are the bus and train stations? Does anybody know?</p> <p>We should check the schedules.</p>
Classification	(D1) Monitoring and repairing the shared understanding

Items associated with alternate paths:

- If the student selects the first credited response (How far away. . . ), the student gets a second chance to suggest that the team check the schedules (**item 319**).
- If the student selects the second credited response (We should check the schedules) or the other two responses, Brad provides information about the bus schedule (one leaves at 12:15 and arrives at 1:45) and the student is able to ask if there is enough time to get to the bus station (**item 318**).

### Part 3 – Sample Screen #10

Regardless of the path taken, the information about the bus schedule is shared and recorded on the notepad. Brad identifies a potential problem: there may not be enough time to travel by bus.

The screenshot shows a digital interface for the PISA 2015 assessment. On the left, a chat log is displayed with messages from Brad, You, and George. Brad notes a bus at 12:15 arrives at 1:45, while the next bus leaves at 1:00. You ask if there's enough time to get to the bus station. George responds that it takes 15 minutes each way. Brad concludes there's not enough time for the bus. You then suggest going to the bus station to see if Brad catches the bus. The right side of the screen shows a map with the following details:

- Train Station:** Represented by a train icon.
- Bus Station:** Represented by a bus icon.
- School:** Represented by a person sitting at a desk icon.
- Food Court:** Represented by a fork and knife icon.
- Internet Cafe:** Represented by a coffee cup icon.
- Notepad:** Shows the note: "12:15 bus arrives airport at 1:45."
- Time:** A red-bordered box shows "12:00 PM".
- Distances:** Arrows between locations are labeled "15 minutes".
- Characters:** Zhang, Brad, You, and George are shown as small human figures.

Item	CC101320
Credited Response	How about the train?
Classification	(C2) Enacting plans

The credited response recognises that the last transportation option should be considered given the potential problem with the bus.

The incorrect responses lead to a rescue by Brad, who suggests that they consider the train.

## Part 3 – Sample Screen #11

PISA 2015

Introduction

Part 3 - Directions

Who's in the Chat

You Brad Rachel George

That's too late. I'll make a note.

You: Is there enough time to get to the bus station?

George: Well, it takes about 15 minutes to walk to the bus station and about the same to the train station.

Brad: I don't think there's enough time for the bus.

You: How about the train?

George: Good idea!

You:

The train might be a good idea.

OK, can you check the train schedule, Brad?

I still think there's enough time to catch the bus if he leaves right now.

**Send**

Train Station

Bus Station

Notepad

- 12:15 bus arrives airport at 1:45.

12:00 PM

Zhang Brad You George

School

Food Court

Internet Cafe

Item	CC101321
Credited Response	OK, can you check the train schedule, Brad?
Classification	(C2) Enacting plans

The credited response moves the task forward by asking a team member to find information needed to make a decision about the train.

Selecting one of the incorrect options leads to a rescue by George, who asks Brad to check the train schedule.

## Part 3 – Sample Screen #12

Brad provides information about the train schedule and that information is recorded on the notepad.

PISA 2015

Introduction

Part 3 - Directions

Who's in the Chat

You Brad Rachel George

bus station and about the same to the train station.

Brad: I don't think there's enough time for the bus.

You: How about the train?

George: Good idea!

You: OK, can you check the train schedule, Brad?

Brad: There's a train to the airport at 1:00. It gets there at 2:00. I'll make a note.

You:

Thanks Brad, that looks like a good option.

Maybe Zhang would enjoy the bus ride more.

How much does a train ticket cost?

That's better, let's take him to the train station.

**Send**

Train Station

Bus Station

12:00 PM

Zhang Brad You George

Notepad

- 12:15 bus arrives airport at 1:45.
- 1:00 train arrives airport at 2:00.

Item	CC101322
Credited Response	How much does a train ticket cost?
Classification	(C2) Enacting plans

The credited response is correct because it has been established that that team needs to consider both travel time and cost.

## Part 3 – Sample Screen #13

George rescues to resolve the cost issue saying he will lend Zhang the money if needed and Part 3 is concluded.

PISA 2015

Introduction

Part 3 - Directions

Who's in the Chat

You: Brad, Rachel, George

Brad: There's a train to the airport at 1:00. It gets there at 2:00. I'll make a note.

You: How much does a train ticket cost?

George: I have enough for a train ticket. I'll lend it to him.

Brad: That's great. Let's go.

Click the 'Continue' button.

Train Station

Bus Station

Notepad

- 12:15 bus arrives airport at 1:45.
- 1:00 train arrives airport at 2:00.

12:00 PM

Zhang Brad You George

15 minutes

15 minutes

15 minutes

15 minutes

15 minutes

School

Food Court

Internet Cafe