Appendix A

Collaborative Problem Solving Administration Manual

Collaborative Problem Solving Practice Task

Collaborative Problem Solving Peer Survey

Collaborative Problem Solving Self-Survey

Technical Specifications

ATC21S Collaborative Problem Solving Assessment Tasks

Administration Guide for Teachers

This document is the administration guide for Collaborative Problem Solving Assessment Tasks for use by teachers in Trials in 2011. Please read through this manual prior to the Trial session to ensure that the tasks can be administered successfully and consistently for all students.

Sections:

Section 1: Introduction

The ATC21S project is developing new forms of assessment and teaching approaches to meet the demands of the 21st century. One of the areas of interest is the assessment and teaching of collaborative problem solving. The goal is to deliver assessments that can alert teachers to appropriate learning interventions and give instant feedback to students in order to improve their collaborative problem solving skills.

The tasks are still in development and currently do not provide instant feedback. The purpose of the Trials will be to finalise scoring rubrics, so that the Project can establish empirically based scales that have the capacity to indicate students' location on the developmental progressions associated with each of the skill sets. Student reports will be available from the assessments *after* the Trials. This information will allow teachers to assess their students' collaborative problem solving capabilities. The Project will then work with teachers to develop teaching interventions for students operating at different skill levels.

Please note that access to the tasks is limited to participating countries under the management of the National Project Managers. Login and password access should not be made public nor beyond those involved in the formal research aspect of the ATC21S project. Any schools, teachers, and students participating are to be given access only for the purpose of data collection.

1.1 About Collaborative Problem Solving

Collaborative problem solving (CPS) is conceptualised as being composed of social skills and cognitive skills, consisting of broad strands including participation, perspective taking, negotiating, learning and knowledge building. This broad structure has several elements which underpin the development of the assessment tasks.

1.2 About the tasks

The practice task

The practice task is Light Box. This will help teachers learn the key features of the collaborative problem solving assessment tasks and should be used with students before other tasks to help them understand what they are expected to do. Please refer to the "Practice Task Guide for Teachers" for more information about the Light Box.

The assessment tasks

Currently there are eleven assessment tasks; four categorised under "Puzzles and Experiments" and seven categorised under "Mathematical and Scientific".

These tasks are designed to elicit collaborative problem solving behaviours. Students work in pairs on the tasks. In all tasks communication between partners is through on screen chat messaging. The tasks are different from any other tasks your students are likely to have used. To be successful students must work together. The tasks require collaboration. The tasks are not timed and students are not rewarded for finishing quickly. It is the quality of the student interactions that is important.

Early work has shown that students find the concept of assessing collaboration difficult to understand as most assessments they have previously used have required them to work on their own. Many students perceive it as 'cheating' to ask their partner for help, or to discuss possible solutions with their partner. With these tasks it is precisely students' ability to work together to solve a problem that is being assessed.

Success in these tasks is achieved through active participation, working out what the problem requires and identifying the information each partner holds, organising to work together, reading others' views and suggestions and discussing possible approaches through text chat, as well as of course finding a solution to the problem and learning from the experience.

Students can take notes for themselves if they want to, on paper. However all communication with their partner *must* be through the text boxes in each task. It is important that students are not close enough to talk to each other as this verbal communication will not be captured for analysis.

Student survey

In this project background information about the students undertaking the assessment tasks will be collected. These details will include student age, country, first language, and gender. Students will also be asked to evaluate their performance and their partner's performance. This information will be collected using online surveys presented to each student upon completion of the tasks.

Section 2: Planning

- Please read through this manual to ensure that the tasks can be administered successfully and consistently for all students
- Print this manual if you are reading an electronic copy as you will need a paper copy during the administration of the test
- Check if technology requirements are met on your student computers (refer to document "Technical Specifications and Setup Guide")
- Receive your student logins and teacher login (contact your National Project Manager [NPM] if you have not received these – contact details page 8)
- Using the teacher login provided to you by your NPM, familiarise yourself with the login area and the practice task, as students may request assistance to help them initially with the online environment.

During the testing

- Ensure all students have a computer and access to the internet.
- Ensure pencil and paper is available for students to take notes
- Ensure all students have comfortable and adequate workspaces
- Lighting and screen brightness should enable all students to read the computer screen in comfort. There should not be shadows or glare on the computer screen or writing surface
- The testing room should comfortably accommodate the number of testing stations placed in it
- Testing room must be quiet throughout all test administrations. When testing is in progress, other activities that would disrupt the testing environment should not be conducted

Section 3: Student Details and Registering for CPS tasks

Before beginning, each student will need to be assigned a unique login. Please refer to the accompanying login spreadsheet. There are two pages: "teacher copy" and "student copy" (see Figure 2).

1) In the teacher copy, assign logins to students by writing student names in the "student names" column.
2) Cut the student copy sheet into strips containing individual logins and distribute to students based on their assigned login recorded in the teacher copy.
3) Do not intentionally sit students with the same team codes together.

Section 4: Administration of Tasks

Currently there are eleven tasks; one Practice Task, four categorised under "Puzzles and Experiments", seven categorised under "Mathematical and Scientific".

Practice task	Puzzles and Experiments	Mathematical and Scientific	
Light Box	Olive Oil	Balance	Hexagons
	Hot Chocolate	Small Pyramids	Sunflower
	Laughing Clown	Game of 20	Plant Growth
	Shared Garden	Warehouse	

Each task is part of a bundle with other tasks. Students complete specific bundles of tasks, not all the tasks. The tasks listed against a login in the login spreadsheet define the bundle of tasks relevant to a student.

There is no expectation that all students will complete all their assigned tasks. Students have been oversupplied with tasks to cater for those who complete tasks faster than others.

During administration: 11-step guide for administration

This guide assumes:

- Up to TWO class periods will be available per bundle of tasks (it is assumed that a class period is 50-60 mins). Periods can run consecutively or with a break in the middle (e.g. morning tea or lunch break).
- Paired students will undertake tasks simultaneously. Please ensure those in a pair are seated far enough away from each other to obstruct oral (voiced) communication.
- Pencil and paper may be made available to students.
- To ensure session runs smoothly and efficiently, where possible, have all computers switched on and ready to go with Internet **before** students are seated for the session.

	Write the website http://www.arc-alp.com/c21 on the board.
Step 1	Hand out paper student login strips. Ensure students enter their login and password as it appears on their login strips.
Step 2	You may like to brief students about the ACT21S Project and why your school is taking part or examining 21st century skills such as collaborative problem solving. Read out the instructions to students given below: *"You are about to take part in a trial of some new assessment materials. The tasks will assess how well you can solve problems working with a partner. It is more important that you work together than it si that you solve the problems on your own.* *Sometimes you and your partner will see different objects and instructions so it is very important you communicate with your partner using the on-screen chat messaging.* *Never share your thoughts with your partner by talking out loud to them.* *If you get stuck, ask your partner if they have information that may help, and try and find solutions together.* *You will now have 10 minutes to do a practice task."* Ask students to click "Practice Task."

Step 3	Ensure students select Player A or Player B, depending on what is on their login strip.
Step 4	Ask students to begin task, advancing through until the pair has finished all sections. If students need task assistance, teachers should prompt students to ask their partner. If students need further assistance, teachers may provide group guidance to the whole class during the Practice Task ONLY.
Step 5	When 10 minute practice session is up, say to students: "Click browser 'back' button until you exit out of the practice task. We will now get ready to do the assessment tasks listed on your login sheet. Listen carefully to my instructions"
Step 6	[Teacher: point to relevant sections on login strip] ***"You will start with the first task listed on your login strip, advancing through until you have finished all sections. After that, do the next task on your login strip. Make sure you read all instructions. Select Player A or Player B, depending on what is on your strip .Do not rush. Doing the tasks well with your partner is more important than doing lots of tasks. You can take notes on paper if you wish. Do you understand what I want you to do? Are there any questions? You will have two periods to finish all the activities. You may start now".***
Step 7	If students need task assistance, teachers should prompt students to ask their partner. If students require I.T. assistance, please help students accordingly.
Step 8	If there is a break between period 1 and 2, at the end of period 1 ask students to log out by clicking 'Finish' (where available) or closing browser if no 'Finish' button is available.
Step 9	At the start of period 2 ask students to log back in and continue where they left off.
Step 10	When there is 15 minutes left in period 2, ask students to click "Finish" or browser "Back" button to return to main menu. Then say: ***"Now please click on 'Survey'. You will be given two short on- screen questionnaires about the task and how you got on. We want you to answer these questions ON YOUR OWN. Please start now."***
Step 11	At the end of the period: ***"Thank you very much for taking part in this project. The way you answer the tasks will be used to make the tasks better for teachers and students all over the world. Please hand in your paper notes to me"***
	Keep a look out for students who have been waiting a long time to connect or re-connect with their partner. When both students get disconnected, they may both get message "Waiting for your partner to join" or similar, and may end up waiting indefinitely! Ask these students to re-enter the original URL and log back in again.

Please note any irregularities and difficulties you experience (such as technical issues, issues with this manual or tasks etc.). Please forward this feedback to the National Project Manager.

Section 5: Troubleshooting Guide

PROBLEM	POSSIBLE SOLUTION
Both students from a pair waiting a long time to connect to their partner, with message "Waiting for partner to join" or similar.	Both students need to log out then back in, by re-entering original URL.
Student experiences connection issue that prevents them from continuing with a task or entering a task.	Log out and back in, by re-entering original URL.
Student's chat box stops updating their chat.	Log out and back in, by re-entering original URL.
Text is too big for the screen or is obscured by a graphic in the task.	Re-size the screen. To make the screen smaller click on the screen then hold down CTRL key while pressing – key as many times as required . To make the screen larger, hold down CTRL key while pressing + key as many times as required.
Chat box is not visible.	Click around the area where chat box should be and it will appear.
Students need to log out mid-way through a task.	Click "Finish" and close browser. If no "Finish" button is available, just close browser.
Students need to navigate to main menu mid-way through a task.	Click "Finish" where available, or browser "Back" button.
Students encounter "Page cannot be found" message or similar.	Use browser "Back" button to return to Main Menu.
Both students from a pair get stuck on a task and cannot proceed further with the task.	Ask students if they have tried seeking information and help from their partner. If so, they can move on to next page. If on last page of task, they can move to next task.

Section 6: Contact Information

Your main contact will be your country National Project Manager. They have been involved in the project for many months and will able to answer any questions that are not in this document.

Contact details for your NPM are:
Kathleen Comfort
WestEd
730 Harrison Street,

San Francisco, CA 94107-1242
Ph: 707-217-7454
Email: kcomfor@wested.org
Administrative Assistant:
Anna Araneta
WestEd
300 Lakeside Drive, 25th Floor
Oakland, CA
Ph: 510-302-4261
Email: aaranet@WestEd.org
Associate Professor Esther Care
International Research Coordinator (IRC)
Assessment & Teaching of 21st Century Skills (ATC21S)
Assessment Research Centre
Melbourne Graduate School of Education | The University of Melbourne | VIC 3010 Australia
T: +61 3 8344 0975 | F: +61 3 8344 8739 | M: +61 431 657 341
E: e.care@unimelb.edu.au | W: www.education.unimelb.edu.au/arc

CUT ALONG HORIZONTAL LINES AND DISTRIBUTE TO STUDENTS								
student001	exam001	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
		A	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth
student002	exam001	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
		B	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth
student003	exam002	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
		A	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth
student004	exam002	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
		B	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth
student005	exam003	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
		A	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth
student006	exam003	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
		B	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth

Figure 1. An example of part of a login spreadsheet showing the "teacher copy" page. Teachers should have received their own version from their NPM.

ATC21S CPS TRIALS
Teacher Copy

Date:				Start time:		End time:			
School:				Class:		Age Group:			
Student ID	Team Code	Player	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Student Name
student001	exam001	A	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth	
student002	exam001	B	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth	
student003	exam002	A	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth	
student004	exam002	B	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth	
student005	exam003	A	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth	
student006	exam003	B	Math & Science Game of 20	Math & Science Balance	Puzzle & Experiment Laughing Clowns	Math & Science Small Pyramids	Math & Science Hexagons	Math & Science Plant Growth	
student007	exam004	A	Math & Science	Math & Science	Puzzle & Experiment	Math & Science	Math & Science	Math & Science	

Figure 2. An example of part of a login spreadsheet showing the "student copy" page. Teachers should have received their own version from their NPM.

ATC21S Collaborative Problem Solving Assessment Tasks

Practice Task Guide for Teachers

This document provides teachers with a guide to the Collaborative Problem Solving Practice Task ("Light Box") for use in Trials in 2011.

About the practice task

The practice task – "Light Box", will provide an example of the key features of the collaborative problem solving assessment tasks. Light Box should be attempted by teachers before the Trial session and by students before they attempt any of the assessment tasks. Should students need task assistance, teachers may provide guidance at group or individual levels during the practice task ONLY. Thus, teachers will need to familiarise themselves with Light Box in order to answer any questions students may have. The instructions below provide guidance to teachers for accessing and completing Light Box.

Task access

You may familiarise yourself with the task by having yourself and a colleague login, as Teacher Login A and Teacher Login B, respectively; or if you do not have a colleague available, you can login using two browsers or computers, as explained below.

1) In one browser (eg. Explorer), go to: http://www.arc-alp.com/c21/
2) Enter Teacher Login A:
   Student ID: [refer to login given to you by NPM]
   Team Code: [refer to login given to you by NPM]

3) Fill in the questionnaire with pretend information and click on "Continue"
4) Click on "practice task"
5) Click on Player A

   You will get the message: "Waiting for your partner to join…"

6) In a **different** browser (eg. Firefox) or on a different computer, go to: http://www.arc-alp.com/c21/

7) Enter Teacher Login B:
   Student ID: [refer to login given to you by NPM]
   Team Code: [refer to login given to you by NPM]

8) Fill in the questionnaire with pretend information and click on "Continue"
9) Click on "practice task"
10) Click on Player B

    Task should load with different views for each player (browser)

Key task features

Light Box consists of:

1) A chat box for students to communicate with their partner, located on the bottom right hand corner of the screen. Students enter messages in the "input message" window and click "send" to send the chat messages to their partner. A record of the conversation appears in the rectangular box above the input message window.

2) A task environment that contains a different view for Player A and Player B and different task resources for each player.

3) Buttons to allow players to move on to next page or exit the task (players cannot go back to a previous page in the task). Lightbox has two "pages" for completion.

All of the assessment tasks will contain these three basic features, although they may differ slightly in layout and appearance.

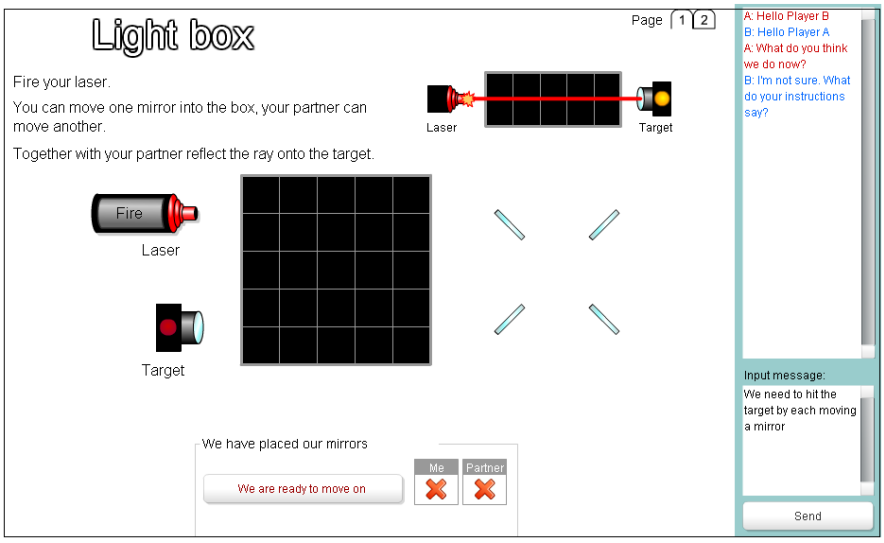

Figure 1. Player A's view of Page 1 when chatting is in progress.

Task solution – Page 1

The goal of the task is for both players to place their individual mirrors in the correct position on their respective grids to allow the laser to hit the target. In order to do this, Player A must fire the laser by clicking "Fire" to allow players to see the path of the laser and how it is to be diverted using the mirrors. One solution is for Player A to place a mirror in the position depicted in Figure 2 and for Player B to place their mirror in the position depicted in Figure 3. Players must communicate with each other to identify the goal of the task as well as to coordinate the firing of the laser and the placement of the mirrors.

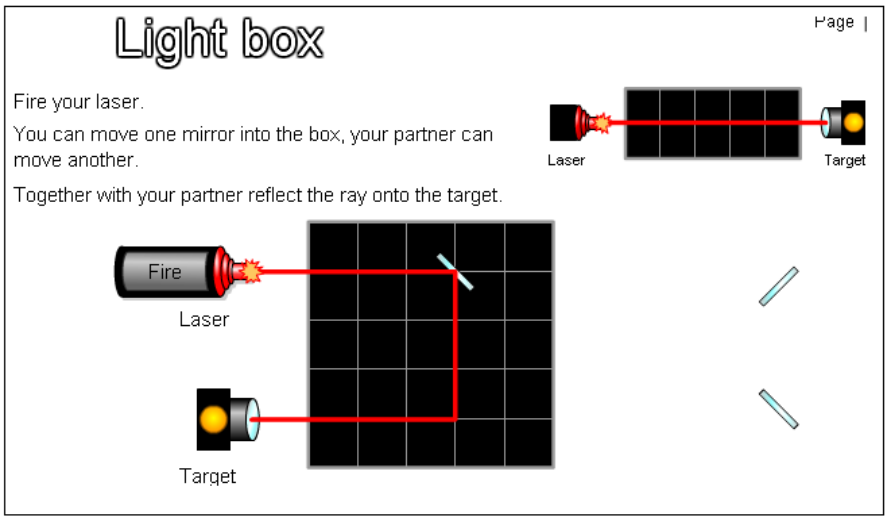

Figure 2. Player A's view of Page 1 after both players have placed their mirrors in the correct position and laser is fired.

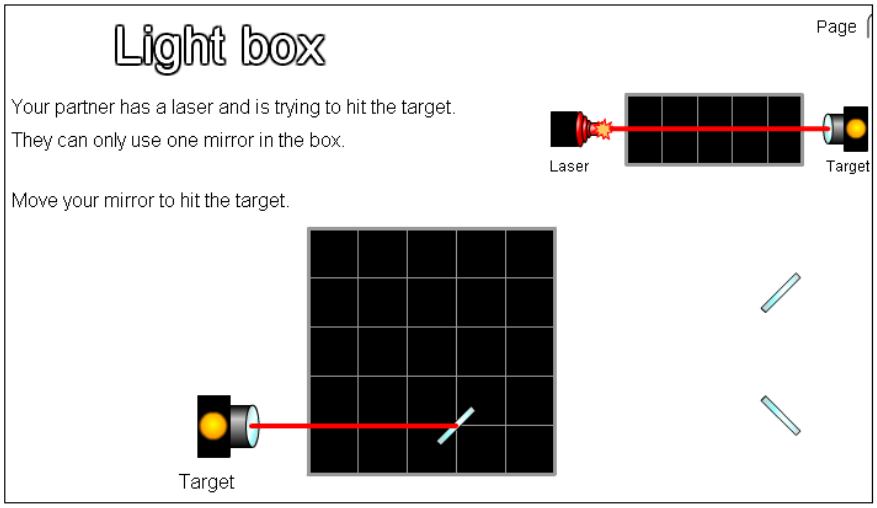

Figure 3. Player B's view of Page 1 after both players have placed their mirrors in the correct position and laser is fired.

Task solution – Page 2

Again, the goal is to divert the laser into the target. This time, the path of the laser cannot be seen and only one mirror is required. Players receive identical tasks which they are to solve independently of the other player. However, if their task solutions do not match they will be told "Your answer does not match your partner's". They may choose to ignore this message or communicate to get matching answers. Figure 4 depicts the correct mirror placement by both players. This placement leads to the task message "Your answer matches your partner's".

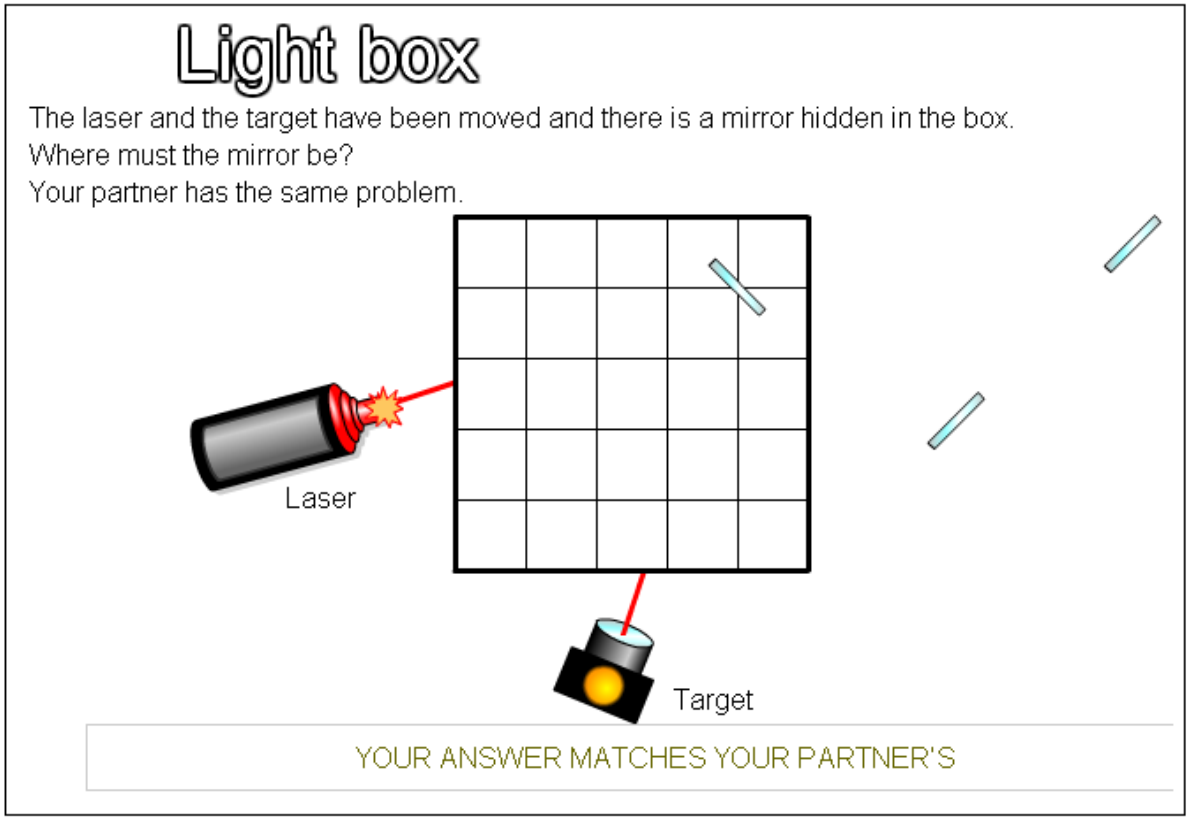

Figure 4. Player A and Player B's view of Page 2 after both players have placed their mirrors in the correct position.

Peer Assessment
Question **When did your partner try to work with you?**
Response Options
· Never
· When what we had to do was clear
· When what we had to do was not clear
· When I asked for information or ideas

Peer Assessment
Question **Did your partner reply to chats?**
Response Options
· No
· Yes

Peer Assessment
Question **Did your partner start chats?**
Response Options
· No
· Yes

Peer Assessment
Question **What did your partner do when you were doing the tasks?**
Response Options
· Waited for me to explain what to do
· Asked me for answers
· Tried to do the tasks alone
· Worked hard with me to solve the problem

Peer Assessment
Question **How did your partner react when you had an idea?**
Response Options
· My idea was ignored
· My idea was used by us both
· My idea was used along with my partner's ideas

Peer Assessment
Question **How easy was it for you to understand your partner's chat?**
Response Options
· It was hard to understand
· After a while it was easy to understand
· It was easy to understand straight away

Peer Assessment
Question **What did your partner do when you didn't agree?**
Response Options
· Ignored me
· Argued with me

· We eventually agreed

Peer Assessment

Question **How good is your partner at these tasks?**

Response Options

· Not very good
· Good
· Good at some parts, but not good at others

Peer Assessment

Question **What is the best way to describe the way your partner used chat?**
My partner's chat was mostly…

Response Options

· not there
· telling me what she/he was doing
· asking me what I was doing
· checking how things were going

Peer Assessment

Question **How did your partner plan with you?**
My partner…

Response Options

· started before we were ready
· chatted about what the task wanted us to do
· chatted about what we needed to do together

Peer Assessment

Question **Did your partner chat about using objects to solve the problem?**
My partner…

Response Options

· didn't chat with me about it
· chatted about what to use
· chatted about how to use things

Peer Assessment

Question **How did your partner plan the approach to the task?**
My partner…

Response Options

· tried things without telling me
· told me what she/he was going to do next
· told me all the things she/he was going to do

Peer Assessment

Question **How did your partner try to solve the task?**
My partner…

Response Options · tried different things
· tried one thing at a time
· checked how well each thing worked

Peer Assessment
Question **How much did your partner help to make the problem simple?**
My partner…
Response Options
· didn't know what to do
· had ideas about what to do
· explained exactly what we needed to do

Peer Assessment
Question **What happened when you and your partner had different information ?**
Response Options
· We worked on our own
· I asked my partner for information
· My partner asked me for information
· We shared our information

Peer Assessment
Question **How well did you partner explain things to you?**
My partner…
Response Options
· was hard to understand
· made some sense
· made things clear

Peer Assessment
Question **What happened when things were unclear?**
My partner…
Response Options
· got frustrated
· was guessing what to do
· tried different things to see if they would work

Peer Assessment
Question **What happened when you got stuck?**
My partner…
Response Options
· tried the same thing over and over
· tried different things
· started again from the beginning of the problem

Peer Assessment
Question **What did your partner do when you provided information?**
Response Options
· Used one piece of information at a time
· Used many pieces of information

· Combined all the information

Peer Assessment

Question **What did your partner do when you needed more information?**
Response Options
· Waited for me to say what I needed
· Sent me one sort of information
· Tried giving me different sorts of information

Peer Assessment

Question **What happened when you had lots of confusing information?**
My partner…
Response Options
· wrote everything down
· listed the main things
· reorganised the information

Self Assessment

Question **When did you try to work with your partner?**
Response Options
· Never
· When what we had to do was clear
· When what we had to do was not clear
· When he/she asked for information or ideas

Self Assessment
Question **Did you reply to chats?**
Response Options
· Yes
· No

Self Assessment
Question **Did you start chats?**
Response Options
· Yes
· No

Self Assessment
Question **What did you do when you were doing the tasks?**
I...
Response Options
· waited for my partner to tell me what to do
· asked my partner for the answers
· had to do the tasks on my own
· worked hard with my partner to solve the problem

Self Assessment
Question **How did you react when your partner had an idea?**
I...
Response Options
· ignored his/her ideas
· used his/her ideas
· used my ideas with his/her ideas

Self Assessment
Question **How easy was it for your partner to understand your chat?**
Response Options
· My partner did not seem to understand me
· I had to say the same thing in different ways
· I only had to say things once to be understood

Self Assessment
Question **What did you do when you didn't agree?**
Response Options
· I ignored my partner
· I argued with my partner

· We eventually agreed
Self Assessment
Question **How good are you at these tasks?**
I am ...
Response Options
· not very good
· good
· good at some parts, but not good at others

Self Assessment
Question **What is the best way to describe the way you used chat?**
I mostly...
Response Options
· did things by myself
· told my partner what I was doing
· asked my partner what she/he was doing

Self Assessment
Question **How did you plan with your partner?**
I...
Response Options
· did not read the instructions
· talked about what the task wanted us to do
· talked about what we needed to do

Self Assessment
Question **Did you chat about using objects to solve the problem?**
I...
Response Options
· didn't chat about it
· chatted about what to use
· chatted about how to use things

Self Assessment
Question **How did you plan the approach to the task?**
I...
Response Options
· clicked on different things to see how they work
· thought about what I was going to do next
· thought about all the steps I needed to follow

Self Assessment
Question **How did you try to solve the task?**
I...
Response Options
· tried different things
· tried one thing at a time
· checked how well each thing worked

Self Assessment
Question **How much did you help to make the problem simple?**
I...
Response Options
· didn't know what to do
· had ideas about what to do
· knew exactly what to do

Self Assessment
Question **What happened when you and your partner had different information?**
Response Options
· We worked on our own
· My partner asked me for information
· I asked my partner for information
· We shared our information

Self Assessment
Question **How well did you explain things to your partner?**
I...
Response Options
· found it very difficult
· found it hard for some things
· found it easy

Self Assessment
Question **What happened when things were unclear?**
I...
Response Options
· got frustrated
· guessed what to do
· tried different things to see if they would work

Self Assessment
Question **What happened when you got stuck?**
I...
Response Options
· tried the same thing over and over
· tried different things

· started again from the beginning of the problem

Self Assessment
Question **What did you do when your partner provided information?**
I...
Response Options
· used one piece of information at a time
· used many pieces of information
· combined all the information

Self Assessment
Question **What did you do when your partner needed more information?**
I...
Response Options
· waited for my partner to tell me what was needed
· sent one sort of information
· tried giving different sorts of information

Self Assessment
Question **What happened when you had lots of confusing information?**
I...
Response Options
· wrote everything down
· listed the main things
· reorganised the information

ATC21S Collaborative Problem Solving Assessment Tasks

Technical Specifications and Setup Guide

This document is for technical staff responsible for setting up the assessment tasks on school computers during Trials in 2011. Please read and follow the instructions in this document before your school is due to participate in the Trials, in case you experience any unexpected technical issues.

Technical specifications

Below are hardware, software and IT requirements for the Collaborative Problem Solving Assessment Tasks:

Technical specifications

- computer is needed for each student
- devices supported - PC or Mac
- browsers - PC: Microsoft IE 7.0+ or FireFox 3.0+; Mac: Safari 4.0+ or FireFox 3.0+
- browser settings - javascript and pop-up windows must be enabled
- other capabilities - java 1.6+ installed and enabled
- plugin - Adobe Flash 10.3
- clear browser caches prior to test administration
- Internet connectivity - broadband 1.5Mbit/s or higher recommended
- screen size/resolution - 1024x768 or higher recommended, works at less

Access to external website

The assessment tasks require access to an external website: http://www.arc-alp.com/c21
Please ensure that proxy settings and filters do not block this site and its components during the Pilot. You will need to follow the instructions in the next section ("Test for site access") to verify that the system will work at your school.

Test for site access

To test for site access, please follow these instructions:

11) In one browser (eg. Explorer), go to: http://www.arc-alp.com/c21/

12) Enter Teacher Login A:
Student ID: [refer to login given to you by NPM]
Team Code: [refer to login given to you by NPM]

13) Fill in the questionnaire with pretend information and click on "Continue"

14) Click on "Mathematical and Scientific"

15) Click on "Balance"

16) Click on Player A

You will get the message: "Waiting for partner to join…"

17) In a **different** browser (eg. Firefox) or on a different computer, go to: http://www.arc-alp.com/c21/

18) Enter Teacher Login B:
Student ID: [refer to login given to you by NPM]
Team Code: [refer to login given to you by NPM]

19) Fill in the questionnaire with pretend information and click on "Continue"

20) Click on "Mathematical and Scientific"

21) Click on "Balance"

22) Click on Player B

Task should load with different views for each player (browser)

23) Click browser "Back" button to return to Main Menu in both browsers

24) Click on "Puzzles and Experiments" in both browsers

25) Click on "Olive Oil" in both browsers

26) Click on Player A in one browser and Player B in the other browser

Task should load with different views for each player (browser)

If there are connection issues during any of the above steps, please contact your National Project Manager (NPM) as soon as possible:
NPM: enter your contact details here.