



## Total Recall

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**Grade Level: 3**

**Time Allotment: 1 hr**

**Overview:** In this lesson, students will test their ability to pay attention to two things at once. They will be asked to recall details about a particular person that entered the classroom while they were involved with a different activity. The students will compare their predictions and results with a similar experiment from “DragonFly TV.” Finally, students will test out their memory skills by playing an interactive memory game on the Internet.

**Subject Matter:** Science

### Learning Objectives:

- Students will begin to gain familiarity with the scientific process by forming a hypothesis, testing it, and then formulating a theory.
- Students will test their observance skills by recalling details of a particular person.

**Standards:** Montana Science Standard 1.3: *Students design, conduct, evaluate, and communicate scientific investigations. Represent, communicate, and provide supporting evidence of scientific investigations.* (Source: <http://www.opi.state.mt.us>)

**Media Components:** DragonFly TV #111: Human Activity

(<http://www.learningplanet.com/act/mre/index.asp>) -- Mr. Elephant’s Memory Game by the Learning Planet is an interactive Internet memory card game for all ages.

### Materials:

- Adult volunteer dressed distinctively in a hat and/or unusual clothing
- Pencils, 1 per student
- 1 piece of chart paper divided into two columns. Write “Can People Pay Attention to Two Things at Once?” above the columns.
- Black marker
- Half sheets of white drawing paper (4 ½ by 11), 1 per student
- 1 overhead copy of “Remember This!”

- Overhead projector
- Crayons

**Teacher Prep:**

Load and cue videotape to “Eyes Wide Open” opening segment, visual cue is an image of a girl’s eyes with “Eyes Wide Open” in white letters across the screen, sound cue is background music

Make an overhead copy of “Remember This!” worksheet

Set up overhead projector

Cut large piece of chart paper, write header

Recruit adult volunteer, assemble outfit

Cut half-sheets of drawing paper, 1 per student

**Introductory Activity:**

1. Place the “Remember This!” worksheet on the overhead projector and before turning it on, tell students they will have 10 minutes to read through the list and try to remember all the things in each category. Turn on projector, making sure students do not have writing utensils while they are studying the list. Allow students to read the words aloud, or to another student if they so choose.
2. While students are engaged, have a distinctively dressed adult volunteer enter the room and stay visible while the students are studying the overhead projector, then leave.
3. Turn off projector, ask students to take out a pencil and a piece of paper and write down anything they can remember from the list. If you want, give them hints such as the names of the categories.
4. Have students share their results, turn the projector back on and examine the list and see who was able to remember the most, which things were forgotten, which were remembered by most students, etc. Ask students if they had any methods they used to help remember things.

**Learning Activities:**

1. After finishing the introductory activity, ask students whether or not they think people can pay attention to two things at once. Tell the students they are formulating a “hypothesis,” making a guess as to whether or not something is a fact. Divide a piece of chart paper into two columns, labeling one column YES and the other NO. Ask each student, “What is your hypothesis, can people pay attention to two things at once?” Write each student’s name in the column of the answer they gave. After you have asked each student for their hypothesis, ask them to collectively count the number of names in each column and write the tally at the bottom. Then ask individuals such questions as “How many people hypothesized that you can pay attention to more than one thing at a time?”
2. Tell the students that an unusually dressed person was in the classroom while the students were engaged with the introductory activity and their ability to remember this person is going to test their hypotheses, or guesses, about whether or not people can pay attention to two things at once. Ask the students to raise their hands if they remember the person who walked into the room. Tell them not to

- share anything about that person, what they were wearing or what they were doing, with their classmates. If they do, the scientific experiment will not work.
3. Give each student a piece of drawing paper and tell them to draw the person they saw enter the room. Tell them to be as detailed as possible, draw the color of the shirt the person was wearing, their hair color, etc., everything they can remember about that person.
  4. When the students have finished their drawing, ask the adult volunteer to reenter the classroom. Have the students share their drawings with the class and discuss what things most of them remembered, anything they all remembered, or things that nobody remembered. Ask such questions as, “After conducting our test, do you think people can pay attention to two things at once?” and “Who thinks their original hypothesis was right after we did our test? Does anybody think they were wrong?” Come up with a consensus on whether or not people can pay attention to two things at once before watching the Dragonfly show. Write it down on the bottom of the chart paper survey or the board and identify it as the class theory. Discuss the concept of theory, that it is a tested hypothesis.
  5. Introduce the Dragonfly TV episode by telling the class they are going to watch two girls test the same idea on their classmates. Ask them to verbally predict whether or not they think the girls’ classmates will be able to pay attention to two things at once. Set the focus for media interaction: tell students you want them pay attention to what Lana the juggler is wearing and what she is juggling. (Answer: Lana is wearing an orange baseball cap, reddish t-shirt, and jeans, and juggling plastic bowling pins.)
  6. Begin watching “Eyes Wide Open” segment of the Dragonfly episode, starting with the cued spot with the white “Eyes Wide Open” letters across the screen. Stop the tape when the kids are playing soccer and one child says “Let’s try to get 30 this time.” Ask students to predict whether or not the kids will remember Lana the juggler. Ask students to answer your media interaction questions. (Answers are in step 5)
  7. Resume the video with the two girls interviewing a soccer player at a picnic table in the park; your audio cue is “When you were playing soccer did you notice anything unusual?” Set the focus for media interaction: students will need to be able to tell you how many soccer players guessed that Lana was wearing shorts and how many guessed she was wearing a hat (Answer: Two guessed she was wearing shorts and one said a hat.). They will also need to tell you whether their prediction of whether or not the soccer players will remember Lana is correct.
  8. Point out to your students when the girls begin asking questions and remind your students to look for how many kids on the show guessed Lana was wearing shorts and how many guessed she was wearing a hat. Stop playing the video with the image of Maddy onscreen saying “It’s hard to pay attention to details when we do more than one thing at a time.”
  9. After watching the experiment, ask students whether or not they think the girls got the same results or different results as your class did. Does your class theory still hold? Ask students whether, based on the girls’ conclusion and the class conclusions, you can formulate a theory on whether or not people can pay attention to two things at once. Ask for suggestions on how to further test this

theory. Write suggestions down and see if you can work in more tests in the future.

**Culminating Activity:**

1. Divide students into groups of three and have each group log on to <http://www.learningplanet.com/act/mre/index.asp>. Set focus for media interaction: Ask students to write down how many levels they were able to complete and whether the memory game was harder or easier than trying to remember all the things on the list during the opening activity. Have the students play Mr. Elephant's Memory Game in their three-person groups.
2. Ask students how many levels they were able to complete in the game. Ask them which was harder, remembering the list of things that opened this lesson or playing the memory game and why.

**Cross-curricular extensions:**

Science

- Research and test memory enhancing activities and games.
- Come up with ways to further test the class theory and have students conduct another experiment on another group of students or at home, using the scientific method.
- Study the brain and its functions

Math

- Create a graph of the class predictions.

**Community Connections:**

- Make handmade Memory card games and donate them to local children's organizations
- Invite a scientist to the classroom to talk about the scientific method or how memory works
- Take a field trip to a local stage production or invite actors to the classroom to talk about tips on memorizing lines and staying focused

# Remember This!

## Dessert

Cookies  
Ice cream  
Brownies  
Cake  
Pie  
Fruit

## Closet

Pajamas  
Jeans  
Black sweater  
Striped pants  
Shorts  
Cowboy boots

## Under the Bed

Monsters  
Comic books  
Dirty socks  
Puzzle pieces  
An orange peel  
A secret diary

## School

Map of the world  
Playground  
lunchboxes  
swing set  
scissors  
glue

## Halloween

ghost  
goblin  
jack-o-lantern  
candy bars  
fairy princess  
trick-or-treat

## Summer

sunshine  
camp  
sleepovers  
no school  
television  
bicycle

## At Home

desk  
bed  
lamp  
kitchen table  
front door  
hallway

## Trees

orange  
apple  
cherry  
pine  
oak  
walnut

## Breakfast

oatmeal  
waffles  
fried eggs  
French toast  
cereal  
bacon