

Creative versus Critical Thinking Skills for Problem Solving

Goals

- Understand creativity and critical thinking skills and the facets within each
- Compare and contrast the value of creativity and critical thinking for problem solving
- Apply knowledge of these skills to identify the best to use in a given situation

Duration

60 minutes to complete

Prerequisites

Completion of the AchieveWorks® Skills assessment

Materials and Preparation

Students will need:

- printouts of the Creativity and Critical Thinking sections of their AchieveWorks Skills reports or an Internet-enabled device to view these results online
- copies of the Problem-Solving Scenarios handout
- one or more partners
- paper and a writing utensil

You will also need:

- a whiteboard/chalkboard or poster

Please print and modify as needed to use these guided activities with your students. Note, however, that this content, or any portion thereof, may not be copied, distributed, republished, uploaded, posted or transmitted without the express written permission of Human eSources Ltd.

Method

Motivational Set (10 minutes)

1. Ask students to partner up and tell them the following riddle. Students discuss in pairs what their answer is. When everyone is ready, ask each group to provide their answer before revealing the actual answer.
 - A farmer goes to the market and buys a fox, a goose and a bag of beans. To get home, the farmer has to cross a river in a boat that can only hold himself plus one other item. However, he can't leave some of his items together. How does the farmer get everything across safely?

Answer: The fox cannot be left with the goose or it would eat it. Likewise, the goose would eat the bag of beans. One solution is for the farmer to first take the goose from side A to side B. Next, he returns and brings the fox to side B. Before he crosses back, he brings the goose back to side A. He then leaves the goose and brings the beans with him to side B. He returns back to side A, grabs the goose, and paddles to side B where he can now safely go home.
2. Ask students to reflect on the problem-solving process and have a discussion with them using the following questions.
 - What were the first steps they took to solve the riddle?
 - Did they establish why certain items couldn't be left together? Did they organize their thoughts? Did they draw out a picture?
 - How was it working with a partner? Could they have done it on their own?
3. When done, ask students to think about their AchieveWorks Skills report and to focus on the Creativity and Critical Thinking sections. It may help to review the skill definitions with the students. Ask students if they feel solving the riddle required using more critical thinking skill or creativity skill.
 - If students comment that more critical thinking was needed (as assumed they will), inform students that creativity was used as well in this situation. Students had to figure out why certain things couldn't be left alone. As well, students were working with a partner and had to be open to different ideas. Innovation was also needed to help solve the problem of getting all the items across the river.

Overview

Tell the students they will be reflecting on their AchieveWorks Skills results as they compare and contrast the skills of critical thinking and creativity. Students will need to have completed this assessment prior to the activity as they will be examining these concepts and applying the best method to different given situations.

Defining Critical Thinking versus Creativity (10 minutes)

1. On the board or poster, list all the skill facets associated with creativity and critical thinking in random order (listed below). Ask students to sort these facets into the appropriate skill. Mention to students that some facets are found in both skills.
 - Creativity: Curiosity, innovation, openness, receptiveness, confidence, optimism
 - Critical Thinking: Planning, curiosity, innovation, openness, receptiveness, modesty, thoroughness
2. When students are done, work as a class to list the facets under what they believe to be the appropriate skill(s). Create a chart on the board for everyone to see.

3. Next, refer to the AchieveWorks Skills results for Creativity and Critical Thinking (use a personal copy or one of the student's) and go through each skill's facets individually. Read over the definition and ask students if they think the facet is categorized correctly in the chart. Make changes as needed.
4. Based on their chart and their understandings, have students write down an explanation for each of these skills. As a class, have them share their definitions and write a couple down on the board by the chart.

Similarities and Differences (10 minutes)

Now that students understand what each term means, ask them to write out what is similar and different between the two skills. Ask students to create a chart listing five of each. Use the following questions and the students' personal assessment results to help.

- What facets are found in both skills?
- What facets are different?
- What kinds of activities or jobs are best for these skills?
- How do the facets impact you? Are you stronger in certain areas than others? Do you tend to use one skill more than the other?
- Are there facets that you scored low in? How do these facets impact your use of the skill?

Problem-Solving Scenarios Handout (20 minutes)

Have students read over the Problem-Solving Scenarios handout and answer the questions that follow. Students can work in pairs if desired. Students should reflect on their assessment results when answering.

- How do you want to solve the problem?
- Identify what skill is needed to solve the problem. Critical thinking? Creativity?
- How should the problem be solved in order to achieve the best results possible?

Reflection Questions (5 minutes)

Ask students to jot down a few answers to the questions below before discussing as a class. (Students could write their responses in full paragraph responses as well.)

- Why is critical thinking important? Why is creativity important?
- How does critical thinking skill help with problem solving? How does creativity skill help?
- How do these skills help you specifically? How do they help you in a job or future career?

Closing Activity (5 minutes)

Ask students to look at the jobs suggested in their AchieveWorks Skills report. Which of the jobs listed are more creative? More critical? How will these skills help them in these jobs?

Handout

Problem-Solving Scenarios

1. You have a group project to do in social studies. You and your two friends decide to spend the weekend at someone's house to finish it. The project is due on Monday and your group has kind of left things until the end. It *has* to get done this weekend. But as soon as you arrive on Friday, your friends show you what's playing at the local movie theater. It's that movie you've been waiting to see! Your friends want to go get tickets and see the movie tonight. You mention that the project has to get done. But there's the whole weekend, they point out. You haven't told them yet, but you need to go back home on Sunday to help your parents. You were counting on using tonight and all of Saturday to get the work done. You ask how long the show is and they say it's only two hours. They want to go early, though, to get snacks and good seats. What do you do?
2. You've started your first summer job working at the snack shack at the beach. You notice that all the employees' schedules are handwritten on a calendar that's thumbtacked to the back of the door. It's clear this calendar has fallen plenty of times as it's dirty, crinkled and covered in footprints. Most of your co-workers are your age and have smartphones. You suggest using an online calendar to your boss. He likes the idea and tells you to bring it up at the staff meeting but warns you that when you do, the assistant manager might shut it down. She's an older lady and has spoken out before about how bad it looks when employees spend time looking at their phones. He asks you to come up with some ideas about this calendar to discuss at the meeting. What do you come up with, and how would you deliver these ideas at the meeting and to the hesitant assistant manager?
3. You have entered a baking contest with your grandma. All the proceeds go to the care home where she lives. Your grandma decides to make her famous apple pie for the judges. Two of the three judges are chefs from the big city but, unfortunately, they get a flat tire and are not able to make it. The organizer decides to get the cook from the care home and a local restaurant chef to take their places. The third judge is a representative from a bank that is sponsoring the event. You know the chef from the restaurant likes your grandma, but you're pretty sure the cook from the care home does not. He is a very health-conscious person and has tried on a number of occasions to get your grandma to eat a better diet. She's always refused, and you're pretty sure he's mad at her. He has apparently tried this with a number of the residents, who have all denied his extra-healthy diet. You think he isn't the right person to judge the contest. You want to do or say something before it begins. What do you do?
4. Your drama teacher is going on vacation and has left you in charge of selecting the theme for the upcoming variety night. For the past few years, a different but traditional musical has been selected. You've done *Grease* and *Phantom of the Opera* already, and last year you did *Les Misérables*. Your classmates are getting bored of musicals and want to do something different. You're excited to try something new but you know your drama teacher is expecting another musical. What do you decide to do?