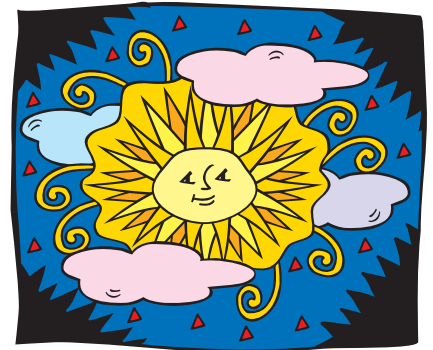# What Season Am I?

Background: There are four seasons. We have learned how the seasons change.

Design Challenge: Design and create a mask that shows one of the four seasons. You cannot use words on your mask. Your mask must show one sign of the season that is from nature and one sign of the season that is manmade. Your mask must have at least one moving part. You must be able to see through your mask.

Criteria: Your mask must

- ☐ show at least two signs of a season, one from nature and one man-made
- ☐ have at least one moving part
- ☐ allow the wearer to see and to move safely
- ☐ not include words.

Materials: Select from the list below.		**Tools:** Select from the list below.
• cardstock • construction paper • craft sticks • glue • paper fasteners (limit 2) • pipe cleaners • ribbon	• rubber bands • scrap paper • string • straws • tissue paper • yarn	• hole punch • markers/crayons • push-pin paper drill • scissors

Targeted Standard of Learning: Science 1.7

Supporting SOL: English 1.1, 1.3; Science 1.1; History and Social Science 1.10

Targeted Standard for Technological Literacy: 8

Supporting STL: 1, 17

Tips for Teachers

Targeted Standard of Learning:

Science 1.7   The student will investigate and understand weather and seasonal changes. Key concepts include

a) changes in temperature, light, and precipitation affect plants and animals, including humans;
b) there are relationships between daily and seasonal changes; and
c) changes in temperature, light, and precipitation can be observed and recorded over time.

Supporting SOL: English 1.1, 1.3; Science 1.1; History and Social Science 1.10

Targeted Standard for Technological Literacy:

8   Students will develop an understanding of the attributes of design.

Supporting STL: 1, 17

Prior Knowledge & Skill	Materials & Preparation	Safety Issues	Class Management	Materials Provided	Design Process
• *A Tree for All Seasons* by Robin Bernard • *Watching the Seasons* by Edana Eckart • *A Tree is Nice* by Janice May Udry • *The Seasons of Arnold's Apple Tree* by Gail Gibbons • *The Reasons for the Seasons* by Gail Gibbons	• See Design Brief for recommended materials. • A push-pin paper drill is a large thumbtack that is secured in a large eraser until needed for making holes in paper and other materials.	• Use of scissors and other tools and materials correctly, including sharp tools used to poke holes	• Individually or with partners • If working in groups of four, assign each student one of the four seasons	• Design Brief • Guided Portfolio (adapt as appropriate/ optional) • Rubric Assessments	Follow the Design Process: • Restate the problem. • Brainstorm solutions. • Create the best solution. • Test the solution. • Evaluate the solution.

Guided Portfolio

Name _____

Group Members _____

1. What is the problem? State the problem in your own words.

_____

_____

_____

_____

_____

_____

_____

_____

Name _____

2.   Brainstorm solutions. Sketch and/or describe some possible solutions.

Name _____

3. Create the solution you think is best.

Keep notes about your problems and how you solve them. Make sketches if they help.

_____

_____

_____

_____

Name   _____

4.   Test your solution.

What season does your mask represent? _____

What is a natural sign of the season? _____

What is a man-made sign of the season? _____

What is your mask's moving part? _____

Can you see where you are going while wearing your mask?   YES   NO

Name   _____

5.   Evaluate your solution.

Was it the best solution? Why or why not?

_____

_____

_____

What would you have done differently?

_____

_____

_____

Rubric for What Season Am I?   Name _____   Date _____

0—no evidence; 1—limited understanding; 2—some understanding with room for improvement; 3—good understanding with room for improvement; 4—substantial understanding

Student Evaluation	0	1	2	3	4
Oral Presentation: The student					
• used complete sentences					
• used descriptive words.					
Guided Portfolio: The student participated in					
• restating the problem					
• brainstorming solutions					
• creating a solution					
• testing the solution					
• evaluating the solution.					
Team Skills: The student					
• used appropriate voice					
• encouraged team members					
• listened to team members					
• was involved in all aspects of the project					
• respected team members.					

Tested Criteria	YES	NO
The mask shows at least one natural sign of a season.		
The mask shows at least one man-made sign of a season.		
The mask clearly represents a season, without using words.		
The mask has a moving part.		
The student can see through the mask.		

Standards of Learning

English (2010)

Oral Language

1.1   The student will continue to demonstrate growth in the use of oral language.
       a) Listen and respond to a variety of electronic media and other age-appropriate materials.
       b) Tell and retell stories and events in logical order.
       c) Participate in a variety of oral language activities, including choral speaking and reciting short poems, rhymes, songs, and stories with repeated patterns.
       d) Participate in creative dramatics.
       e) Express ideas orally in complete sentences.

1.3   The student will adapt or change oral language to fit the situation.
       a) Initiate conversation with peers and adults.
       b) Follow rules for conversation using appropriate voice level in small-group settings.
       c) Ask and respond to questions.
       d) Follow simple two-step oral directions.
       e) Give simple two-step oral directions.

History and Social Science (2008)

Civics

1.10   The student will apply the traits of a good citizen by
       a)   focusing on fair play, exhibiting good sportsmanship, helping others, and treating others with respect;
       b)   recognizing the purpose of rules and practicing self-control;
       c)   working hard in school;
       d)   taking responsibility for one's own actions;
       e)   valuing honesty and truthfulness in oneself and others;
       f)   participating in classroom decision making through voting.

Science (2010)

Scientific Investigation, Reasoning, and Logic
1.1   The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
   a)   the senses are used to observe differences in physical properties;
   b)   observations are made from multiple positions to achieve a variety of perspectives and are repeated to ensure accuracy;
   c)   objects or events are classified and arranged according to characteristics or properties;
   d)   simple tools are used to enhance observations;
   e)   length, mass, volume, and temperature are measured using nonstandard units;
   f)   inferences are made and conclusions are drawn about familiar objects and events;
   g)   a question is developed from one or more observations;
   h)   predictions are made based on patterns of observations;
   i)   observations and data are recorded, analyzed, and communicated orally and with simple graphs, pictures, written statements, and numbers; and
   j)   simple investigations and experiments are conducted to answer questions.

Earth Patterns, Cycles, and Change
1.7   The student will investigate and understand weather and seasonal changes. Key concepts include
   a) changes in temperature, light, and precipitation affect plants and animals, including humans;
   b) there are relationships between daily and seasonal changes; and
   c) changes in temperature, light, and precipitation can be observed and recorded over time.

Standards for Technological Literacy

Standard 1:   Students will develop an understanding of the characteristics and scope of technology.

Standard 8:   Students will develop an understanding of the attributes of design.

Standard 17:   Students will develop an understanding of and be able to select and use information and communication technologies.

Please give us some feedback.

Complete the form below to let us know how this design brief worked for you and your students. Please be specific so that we might use your suggestions to improve the activity. *You can fill this out on your computer, or you can print it, fill it out manually, and scan it.*

Teacher: _____

School: _____

School division: _____

Design brief title: _____

Background *Put an X in the appropriate column:*	Needs to be rewritten	Needs minor adjustment	Is ready for classroom use
Does it set the context for the activity?			
Is it age-appropriate in language, length, and complexity?			
Does it reference prior learning and/or research that the students did that will facilitate designing a solution to a problem?			
Is it detailed enough that an adult will understand the purpose for the design brief?			
COMMENTS. *If any of the questions above are marked other than "ready for classroom use," please provide suggestions here.*			

Design Challenge	Needs to be rewritten	Needs minor adjustment	Is ready for classroom use
Does the challenge support your curriculum?			
Is it age-appropriate in language, length, and complexity?			
Is it detailed enough that an adult will understand the purpose for the design brief?			
COMMENTS. *If any of the questions above are marked other than "ready for classroom use," please provide suggestions here.*			

Criteria Criteria are part of the challenge. They set the limitations for the design. They are not directions.	Needs to be rewritten	Needs minor adjustment	Is ready for classroom use	N/A
Are the limitations age-appropriate?				
Do the limitations encourage critical thinking?				
Is the application of mathematic knowledge/skills integrated into the criteria? If not, should the skill area be addressed?				
Is the application of science knowledge/skills integrated into the criteria? If not, should the skill area be addressed?				
Is the application of social studies knowledge/skills integrated into the criteria? If not, should the skill area be addressed?				
Are language skills integrated into the criteria? If not, should the skill area be addressed?				
COMMENTS. *If any of the questions above are marked other than "ready for classroom use," please provide suggestions here.*				

Materials Materials help set the limitations for the design. The list should include materials that might work.	Needs to be rewritten	Needs minor adjustment	Is ready for classroom use	N/A
Does the materials list encourage a variety of design solutions?				
Does the materials list include a variety of choices for joining items?				
Does the materials list include materials that force students to make decisions?				
COMMENTS. *If any of the questions above are marked other than "ready for classroom use," please provide suggestions here.*				

Tools Tools can be used in the construction of the designed product. They are used to manipulate materials. They cannot become part of the product.	Needs to be rewritten	Needs minor adjustment	Is ready for classroom use
Are the tools listed age appropriate?			
Are all tools needed for the activity included?			
COMMENTS. *If any of the questions above are marked other than "ready for classroom use," please provide suggestions here.*			

Standards of Learning	Yes	No
Does the design brief reinforce the targeted Standard of Learning(s)?		
Are the supporting Standards of Learning appropriate?		
What Standards of Learning would you add or remove?		

Standards for Technological Literacy	Yes	No
Does the design brief reinforce the targeted Standard(s) for Technological Literacy?		
Are the supporting Standards for Technological Literacy appropriate?		
What Standards for Technological Literacy would you add or remove?		

Tips for Teachers	Yes	No
Are the tips listed in the chart helpful for a first-time teacher?		
What tips would you add?		

Guided Portfolio	Needs to be rewritten	Needs minor adjustment	Is ready for classroom use
Are the instructions and questions age appropriate and clear?			
In the "Test your solution" section, do the questions force students to thoroughly test their solutions?			
In the "Evaluate your solution" section, do the questions force students to honestly evaluate their solutions			
COMMENTS. *If any of the questions above are marked other than "ready for classroom use," please provide suggestions here.*			

Additional Comments
Please use this area to provide general suggestions for improving this design brief.