



# STARFISH BOOKLET

Learning Activities  
Primary Levels 4-6

# Activity Guidelines For Students & Parents

**Each week, have students choose  
at least 5 activities  
(use 30-50 minutes per activity)**



## 1. Reading, Writing and Calculation Activities (3R)

Learning activities that teach reading, writing and arithmetic skills for kindergarten students, with topics that include Thai, mathematics, English, social studies, art and more. There are six activities available each week; have students choose at least two per week.

## 2. Makerspace Activities

A creative activity for students to practice systematic thinking and create their work through the STEAM Design Process. Our teachers have created six activities per week; have students choose two activities to undertake per week.

## 3. Problem Based Learning

These are project based learning activities that use problems which occur in the daily lives of students as project topics. Teachers have a total of 6 problem topics for students to choose from, who choose 1 project to work during this period of time that they are at home.

# Our Student Learning Goals for Developing 21st Century Skills



# Reading, Writing and Calculation Activities (3R)

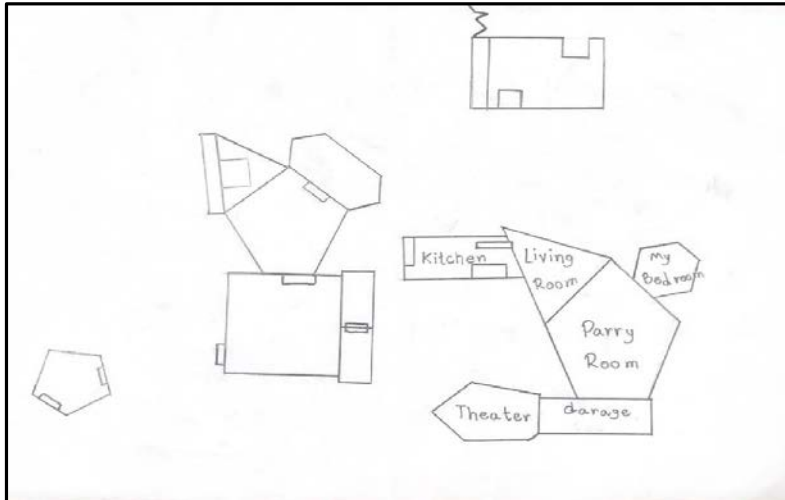
(this sample contains only one activity; for full booklet students choose at least two out of 6 activities per week)

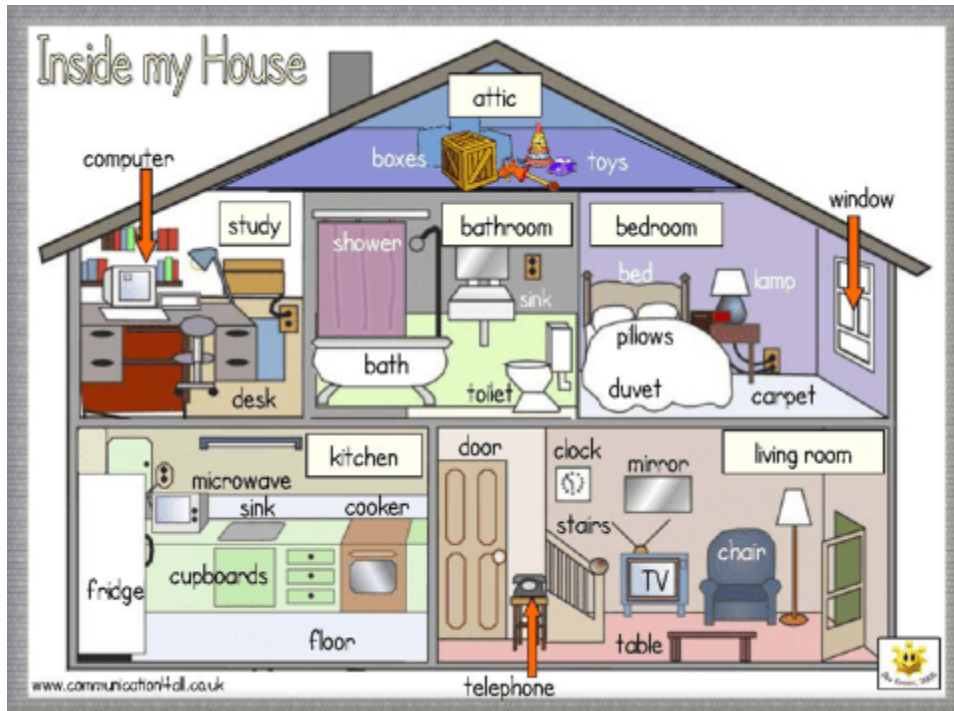


## Activity

Directions. Students are to design a beautiful house plan of their dreams, in which the rooms have various shapes. Inside the box, briefly write the details of the room, such as room name and size. Students then create sentences about the **Inside My House** picture using “There is” and “There are”.

Example of a Dream House design plan





This picture was found at:



What can you see inside the house?

“There is” = use with only one thing      “There are” = use with more than one thing

**Example. There is a fridge in the kitchen.**

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

# Makerspace

## Makerspace Description

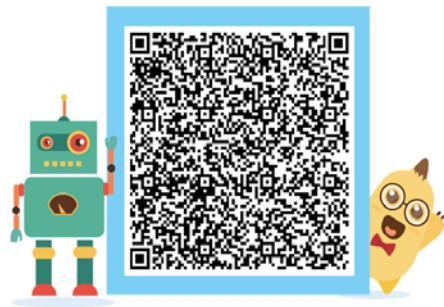
With Makerspace activities, you can create your own work at home. Let's plan our creation according to the STEAM Design Process. The first week, the teacher will ask for a story. Choose a topic that you like, taking into account the resources available at home and that the school provided.

The steps of the STEAM Design Process are:

1. Ask (What should I do?)
2. Imagine (What does your face look like? Try drawing it as you imagine.)
3. Plan (What materials and equipment are needed?)
4. Create (Do it now.)
5. Reflect & Redesign (Did you succeed or not? Were there any problems while working? If yes, why?)

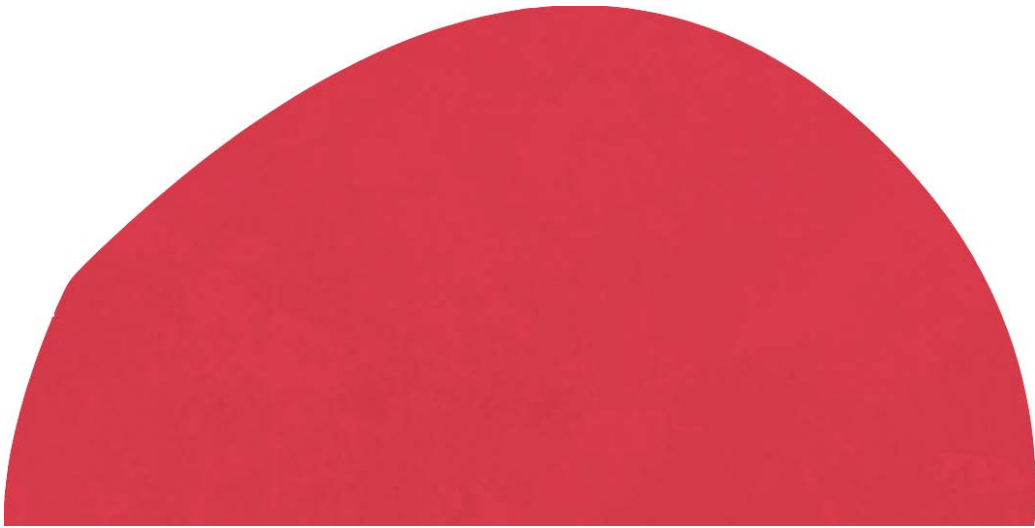
\*\*\* After your creation is finished, don't forget to take a photo and send it to the teacher in the classroom's group LINE chat \*\*\*

Note: Parents and students can go to this QR code to learn more about Makerspace activities:



# Makerspace Activities

(this sample contains only one activity; for full booklet students choose at least two out of 6 activities per week)





## Activity – Plastic Straw Submarine



Picture 1. Materials and supplies.

Picture 2. Making the bent straw and testing its buoyancy.

Picture 3. Experimenting with the straw in the water bottle



Things parents should ask about in order to motivate students before beginning:

Which kinds of objects float, and which kinds of objects don't float? Ask students to give reasons why for each.

## Equipment

1. Large water tank or plastic water basin
2. Water
3. Scissors
4. Water pitcher
5. 1 plastic bottle
6. 1 straw (with bending joint, like the kind used with milk boxes. Clear color is the best)
7. 3-4 paperclips to put on area slightly above the joint of the straw to prevent the straw from being bent. If not available, can use normal rubber bands instead.

## Steps of Experiment

1. Bend the straw at its joint and use scissors to cut the long end to match the length of the short end.
2. After that, bend the straw like seen in Pictures 2 and 3 and fasten the areas above the open endings of the straw with paper clips or rubber bands.
3. Test the buoyancy of the tubes in the water pitcher. Place the straw so it is perpendicular to the water surface, like in Picture 2. If the straw turns over, then add more paper clips or rubber bands to add weight to the bottom and try again.
4. After the testing until the straw can float on water, place it into a water bottle containing water almost to the top of the bottle. Close the bottle cap tightly.
5. After the bottle cap is completely closed, use your hand to squeeze the bottle firmly a few times. Observe what is happening.

## Activity Knowledge Summary

Have parents explain the main concepts of the activity –

The buoyancy of an object depends on the object's weight and size.

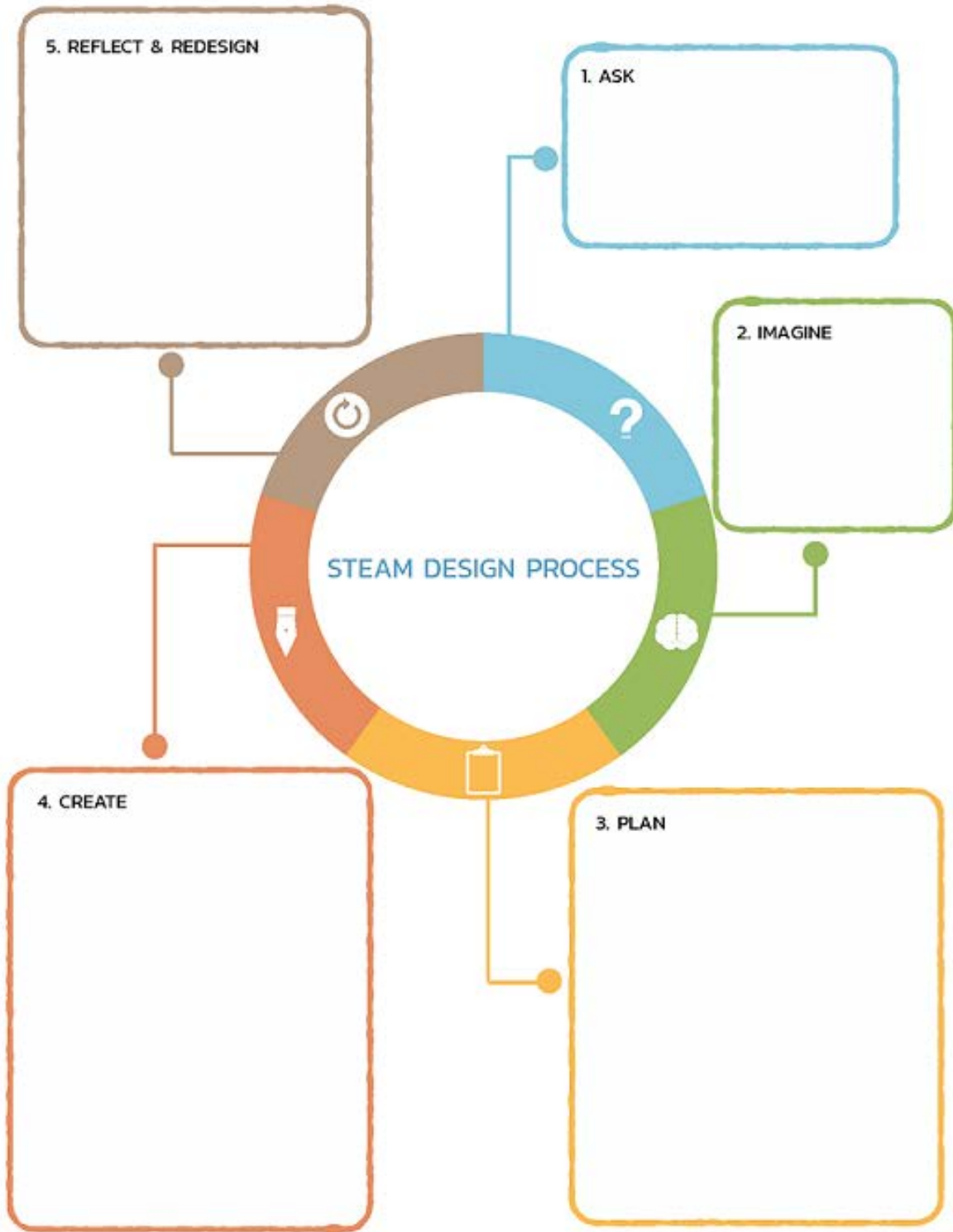
The buoyancy force of water is so that, if an object weighs less or equal to water, it will float.

When you squeeze the bottle, the air pressure inside the straw is compressed by more water, causing it to weigh more and therefore sink.

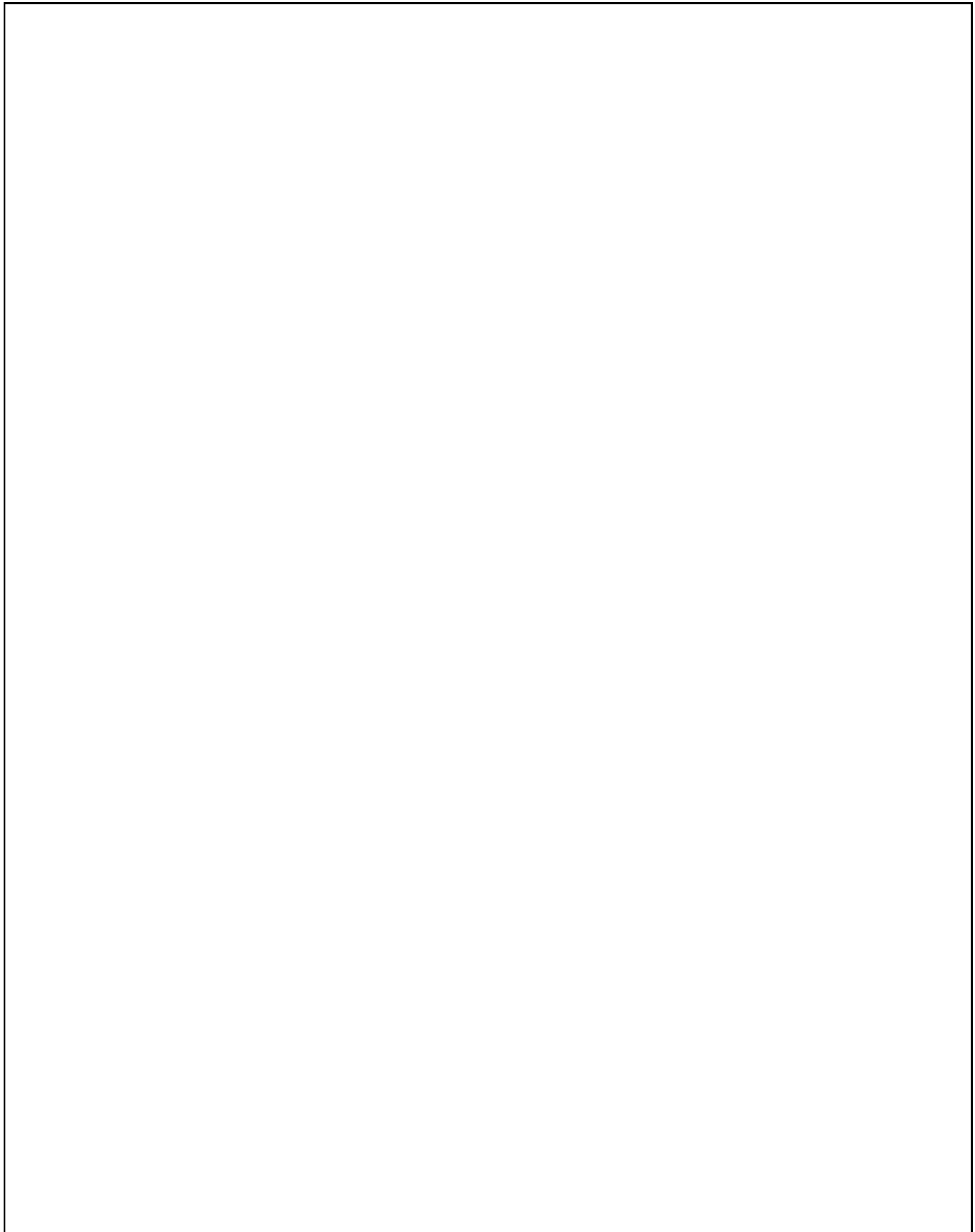
When you stop squeezing the bottle, the air pressure decreases and water comes out of the straw. Therefore, the straw will lose weight and float to the surface.

After finishing, students should take pictures of the experiment to send to their teacher in the classroom LINE chat group.

My creation is:



Picture of Creation 1



# Problem Based Learning Activities

(this sample contains only one activity; for full booklet students choose at least two out of 6 activities per week)



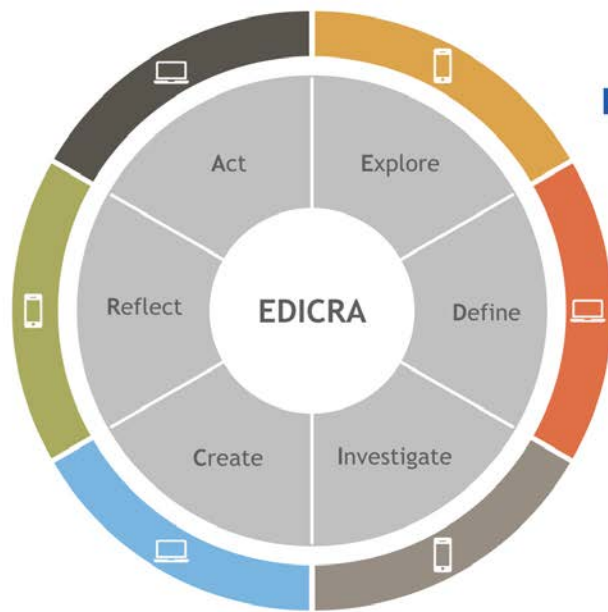
# PBL Activity

Directions. Problem Based Learning activities use problems which occur in the daily lives of students as project topics. Teachers have a total of 6 problem topics for students to choose from, who choose 1 project to work during this period of time that they are at home. Here are the 6 topics you can choose from:

1. Covid-19
2. PM 2.5 pollution
3. Perishable food
4. Forest fires
5. School break is too long
6. Strong wind and heavy rain

Topic chosen by student: .....

After students have selected a topic, they need to do their project by following the EDICRA process, which has 6 steps as seen below:



## Pedagogy

### Problem Based Learning (PBL)

- \*EDICRA is a method for helping students become the owner of their learning by planning what they want to learn based on problems, or what they are interested in.
- \*Develops high-level skills for planning, problem solving, social skills and emotional skills in the student, and builds innovation in their communities.
- \*Promotes students to keep up to date with various media, and introduces technology to be used the learning and creative process.

1. **Explore:** this is the process of exploring things that you wish to learn about.  
Students will explore various things around them to learn more about the problem.

Things to do:

- Have students select the topic that they want to study from the list above. It must be a problem that the student wants to solve.
- After selecting the project topic, students must write the reason/reasons why they are interested in this problem.
- Students list any previous knowledge about the selected topic.

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2. **Define:** this is the step in which students specify the subject of their search about the problem that they are interested in studying.

Additional Suggestions

Students should choose topics that are easy to find information on. This is especially important for students who have limited access to the internet; they should in turn choose topics that they can get information on by asking parents or reading books that they have access to.

In some cases, there may not be a lot available to research.

Things to do:

- List “things I want to know”: These are the topics to be researched.
- List “things I should know:.. These are topics that students should know more about (with parents guiding the selection of the list here).

What do you already know? What do you want to know? What should you know?

My problem is .....

<b>Things I Already Know</b>	<b>Things I want To Know</b>	<b>Things I Should Know (Parents Help With This List)</b>







4. **Create:** this is the action step where students create works that can solve the chosen problem. Students' creative works may be inventions, products, solutions, ideas or suggestions to resolve the problem.

Things to do:

- Make plans and create something!
- Take pictures of the finished work.

Make creative works that solve our problem. The creative work is:

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Equipment

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How To Make

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### How To Use

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(Ask parents to help take pictures or video clips while the student is making the creative work, as well as of the successful finished product. These should be kept for the teacher to see).

5. **Reflect:** This is the step in which students put their work to trial and see if it works or not. They should identify problems and constraints encountered, as well as solutions to those problems and constraints.

Things to Do:

- Observe and comment on whether the creative works really work successfully or not.
- Identify problems and constraints that occurred during the project, and provide solutions to those problems.

Does the creative work successful after being used? Are there any problems? What improvements can be made? Is the creative work effective or not effective?

If it does not work, it is because

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Problems with the creative work are

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Solutions to these problems are

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**6. Act:** In this step, students must apply the knowledge learned from the process to make a type of media which can be distributed to people in their home or the community, in order to use the knowledge gained to create a social benefit.

Things to do:

- Disseminate the knowledge gained from this project by compressing it into a video clip.

At this stage, have students share their knowledge with the public by filming a video. It can be posted on YouTube or social media.

## Learning Evaluation Form for Primary School Students (for use by parents)

### Week 1

**Purpose** To assess student learning based on real outcomes.

**Directions** Please check the box that best describes your satisfaction level:

- 1 = low
- 2 = moderate
- 3 = high

ITEMS	1	2	3
Child has happiness while studying, and is proud of their work.			
Child shows self-responsibility, diligence, patience, and decision-making skills.			
Child strives to complete their work.			
Child knows the many steps for the activities.			
Child conserves and uses resources to good value.			
Child has creativity and imagination.			
Child knows how to face problems and solve them.			
Child is capable of researching information for learning activities; example, asking parents or experts, using a computer, watching news.			
Child is capable of learning together with family and others.			
Child is capable of introducing knowledge to use in their daily life.			

Other Suggestions

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Name of Assessor .....

Date .....

Post-Learning Record Form

Week 1 (date)..... to (date).....

Overall Summary

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Problems and Constraints

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Solutions and Development

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Topics To Ask Support On From Experts

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Name of Assessor .....



