


A close-up photograph of a hand holding a yellow pencil, poised to write on a piece of white paper. The paper has some faint, cursive handwriting in grey ink, including the words "Spokes" and "penn". The background is a soft, out-of-focus light color.

# Project Based Learning

Learn how to research!

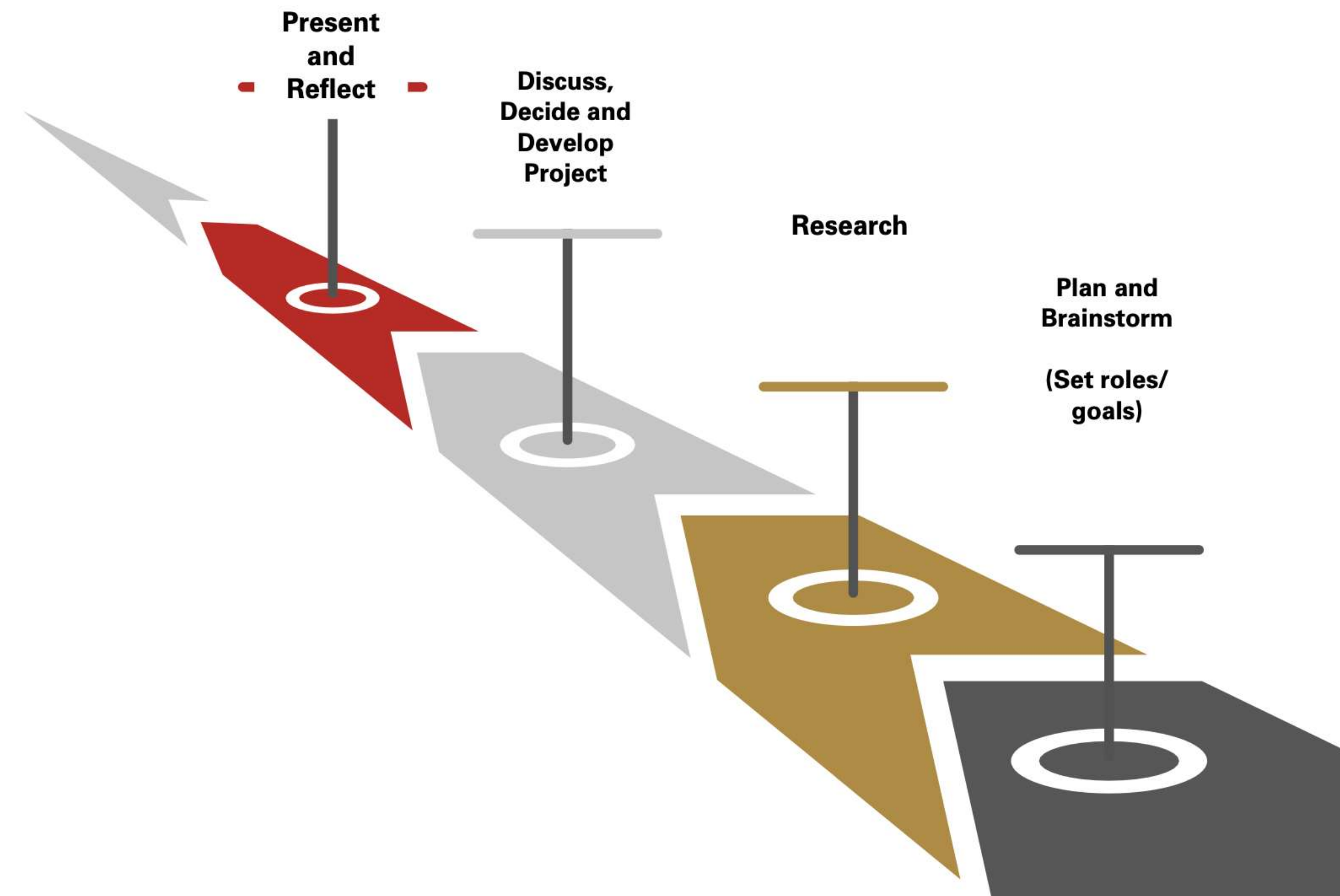
A close-up, slightly blurred photograph of a person's hands. The right hand is holding a red pen and is in the process of writing on a white sheet of paper. The left hand is resting on the paper. The person is wearing a blue long-sleeved shirt. The background is a soft, out-of-focus light green.

**What do you do if you  
want to learn more about a  
topic?**

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## My learning journey of the Project



# Keywords

- ⦿ Research
- ⦿ Sustainable
- ⦿ Climate
- ⦿ Weather
- ⦿ Housing
- ⦿ Developed
- ⦿ Environment
- ⦿ Environmentally friendly
- ⦿ Adaptive



- |                          |   |                          |   |
|--------------------------|---|--------------------------|---|
| <input type="checkbox"/> | Using things without running out.                                     | <input type="checkbox"/> | Finding out new things by studying.         |
| <input type="checkbox"/> | What it's like outside now (sunny, cloudy, rainy...)                  | <input type="checkbox"/> | Can change to work with what you need.      |
| <input type="checkbox"/> | Everything around us, like nature.                                    | <input type="checkbox"/> | To make or build something.                 |
| <input type="checkbox"/> | Places where people live.   | <input type="checkbox"/> | Something that is good for the environment. |
| <input type="checkbox"/> | What the weather is like in a place all the time. (hot, dry, cold...) |                          |   |

# What is research?

**Research** is what you do when you want to learn more about something.

- ◎ Think of this: When you are looking for something to eat you use Google or TikTok to look for a place to eat. This is called research!
- ◎ You want to learn more about places to eat so you search for them online.

**Research** is usually done for more serious topics to learn about them. People research to learn more about science, math, education and people.



# Why are we doing this project?

We are completing this project for **two reasons**:

- ◎ To learn how to **research** new topics and learn about them.
- ◎ To learn more about **sustainable housing** that will work in the UAE's hot, dry desert climate.



# Rules & Expectations

These are the rules you **MUST** follow when we are working on the project:

- ⦿ We will **ONLY** work in class once a week. If you miss this lesson you will miss a whole step and you will lose the points for that step and do it by yourself with no help.
- ⦿ You will be **working in groups of three**. Each student will have a different job. You must help each other.
- ⦿ You must complete the project by making a poster, powerpoint presentation or a video.
- ⦿ **Last day to submit projects on LMS is February 3rd. Presentations will start on January 27th and end on February 14th.**

**YOU are responsible for your work and your group. If no work is done NO grade will be given.**

# What is this project about?

- ⦿ **Our project is about:** how to create a plan for a sustainable home that would work well in the UAE's hot, dry desert climate.
- ⦿ We must think carefully about how to design a house that stays cool in the heat.
- ⦿ We should also make sure the design is good for the environment by using materials and methods that help protect nature and save energy.
- ⦿ We should consider ways to save water, use solar energy, or choose materials that are eco-friendly. Once we have designed our house, we must take a moment to check our plan and ensure that it is both practical and environmentally responsible.



# Sustainable housing

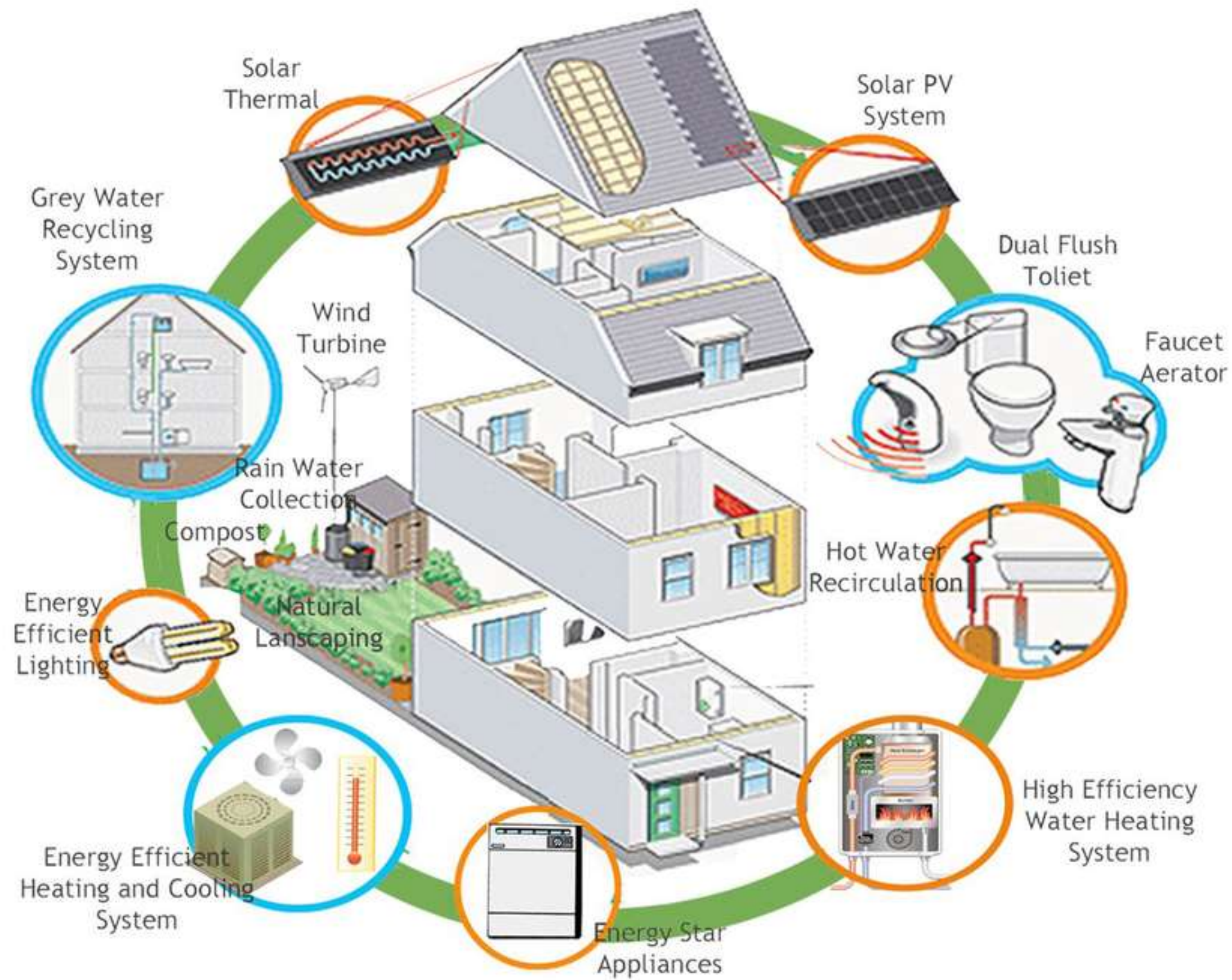
Take a look at this video.

- ⦿ What parts of the design can we use in the UAE?
- ⦿ What parts of the design will not work in the UAE?

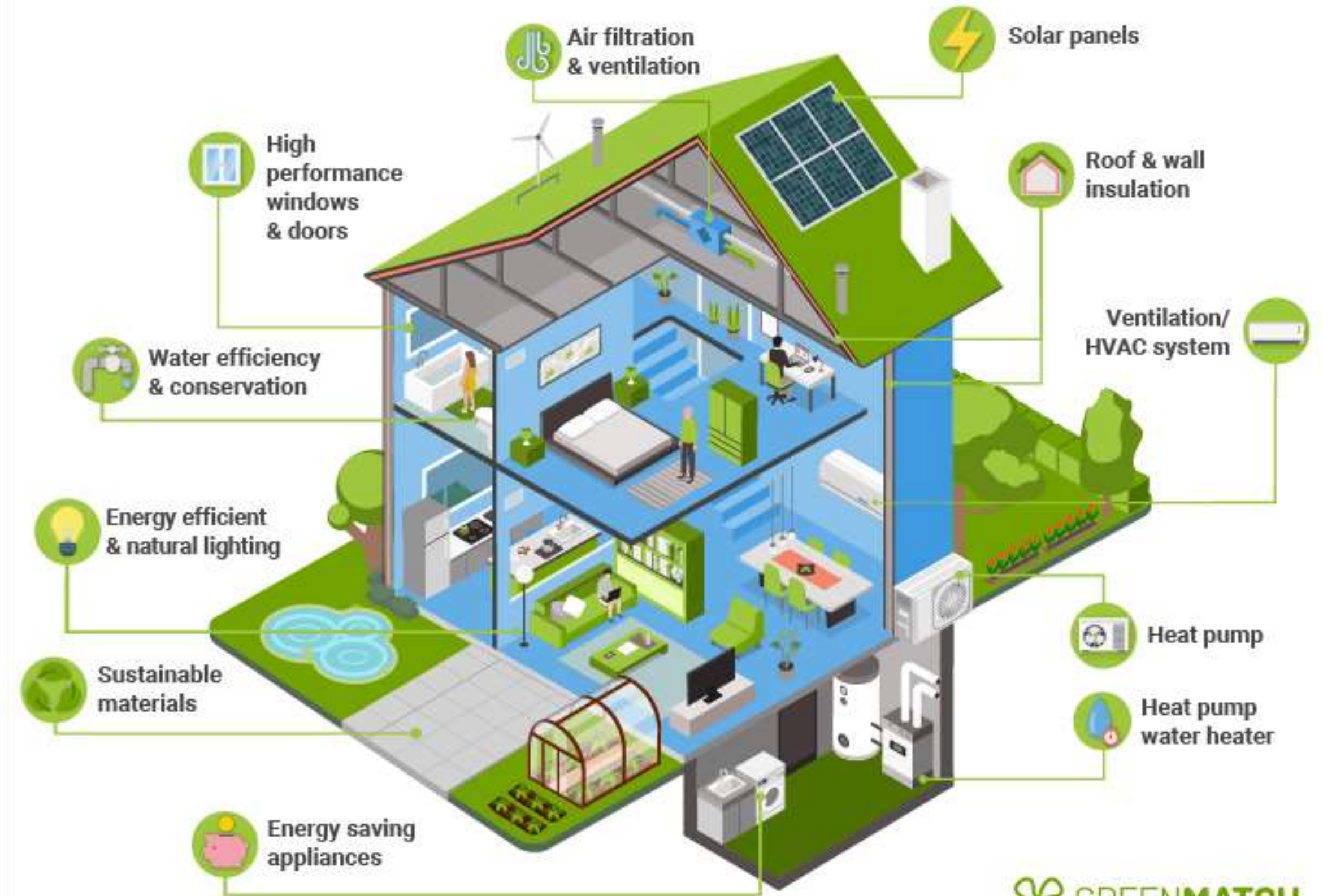


Start the video at 2:23, can watch at 1.25x

# Sustainable housing



## Key elements of eco house design



# Sustainable housing in the Desert

- © Think about features that you will add to your design in the house. How will you make it work for the UAE's climate?

Will work

Will not work

# What should my project look like?

© You can make a poster, PowerPoint or Video:



# Steps of the Project:

- ⦿ Each step will be completed on a separate slide on Classkick. Final project will be submitted on LMS.

## Step 1

Learn the group members and roles from the teacher.

## Step 2

Make a plan about what you will research.

## Step 3

Make research notes about each topic you will put on the project and discuss.

## Step 4

Create your poster, PowerPoint or video and show it to the teacher.

## Step 5

Upload your project onto LMS by **February 3rd**.

## Step 6

Present your project with all your group members.

# Step 1: Group Members & Roles

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© Write down the name of the group members and what roles you will take:

Member's Name	Role

## Take a look at these roles:

1. **Traditional homes researcher:** Look into a range of traditional home design features in desert environments. How did they use these to keep homes cool?
2. **Energy expert:** think about different renewable sources of energy. How can we include them in our house design?
3. **Resources expert:** Think about how a sustainable house saves water and reduces waste.
4. **Materials expert:** Look into different materials that you can use to build houses, and which materials are more sustainable.
5. **Solutions expert:** Think about new and original ways to meet the desert challenges and make your home design more sustainable.
6. **Designer:** Focus on making the house design look creative and engaging.
7. **Proofer:** Focus on checking the writing and making sure there are no mistakes.

# Step 2: Plan your research

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◎ Make a plan that will help you research sustainable houses:

## Things you can include:

- type of house
- building materials
- electricity used
- water source
- sustainable solutions
- design of the house
- greenery (plants, garden...)
- energy saving features

# STOP and think!

/

	<input type="checkbox"/> Beginning	<input type="checkbox"/> Developing	<input type="checkbox"/> Acquired
<b>Which level do you think you are? Check one.</b>	I find it hard to do this project work. I find it hard to set my goals.	I feel ready for the project and feel like I will try my best. I can think of a goal, but I need some help to understand the idea more.	I am excited about the project, and I am ready to work hard on it. I have a good idea of what learning goals I want to achieve.
<b>How can you improve your work?</b>			

# Step 3: Research and Discussion

/

© Here are some hints on how to research a new topic:

## Research

Think about the topic and make a plan for what **words** you will be researching in google.

### **For example:**

- Sustainability
- Sustainable houses
- Environmentally friendly houses

## Read

Find information on trusted websites that end in .edu or .org or trusted websites like National Geographic Kids and Britannica Kids.

If not sure of a website ask the teacher.

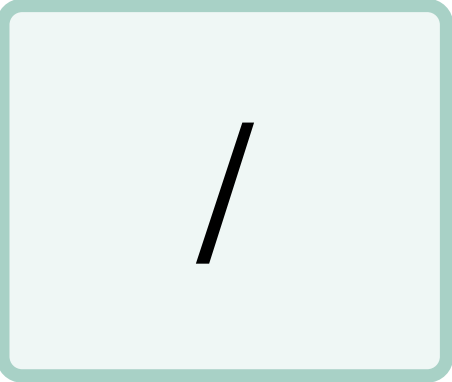
## Rewrite

Choose some of the information on the website to **add to your research slide IN YOUR OWN WORDS!**

Make sure that you **ONLY** add information you understand and can explain when presenting.

If there is information you don't understand you can put it into ChatGPT and ask it to "make it simple".

# Step 3: Research and Discussion



◎ Write 5-8 sentences for each part:

<b>What were houses like in the past?</b>	<b>How are houses built now? What problems do they make for the environment?</b>	<b>How can you build more sustainable houses? How will they help the environment</b>

# Step 3: Research and Discussion

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- ⦿ Enter the links for where you found the information:

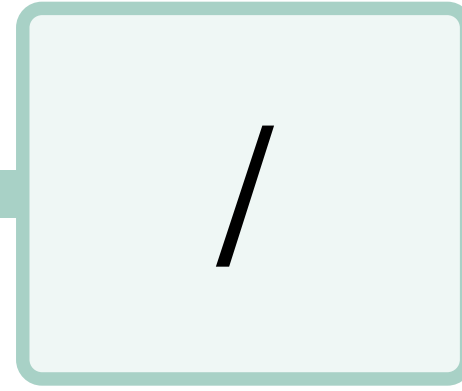
Links

# STOP and think!

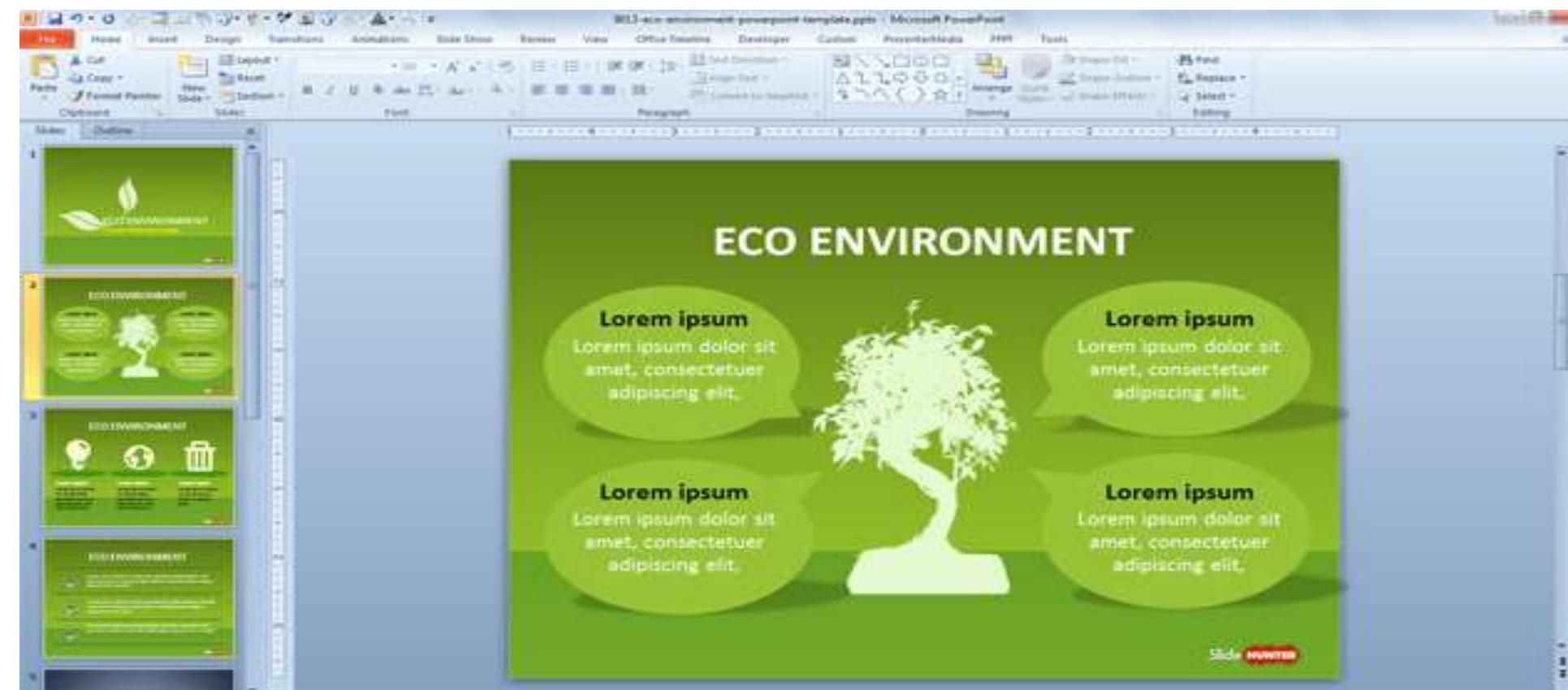
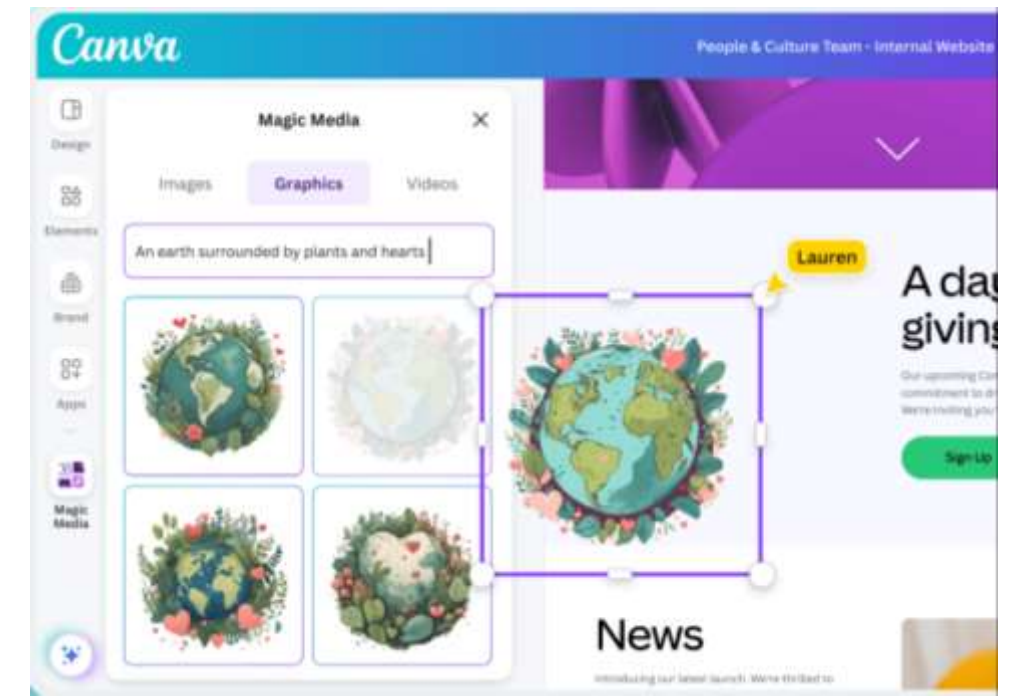
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	<input type="checkbox"/> Beginning	<input type="checkbox"/> Developing	<input type="checkbox"/> Acquired
<b>Which level do you think you are? Check one.</b>	I found it hard to find reliable sources of information. I found it hard to think of research questions.	I found some good information from my sources. I asked some good questions to help us think about the system	I found a lot of reliable sources. I could connect ideas between them. I asked big questions which made the group really think hard.
<b>How can you improve your research?</b>			

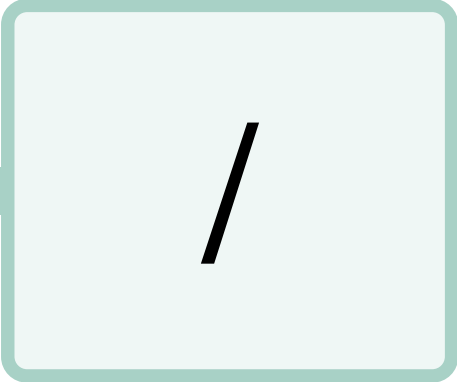
# Step 4: Add information to your project



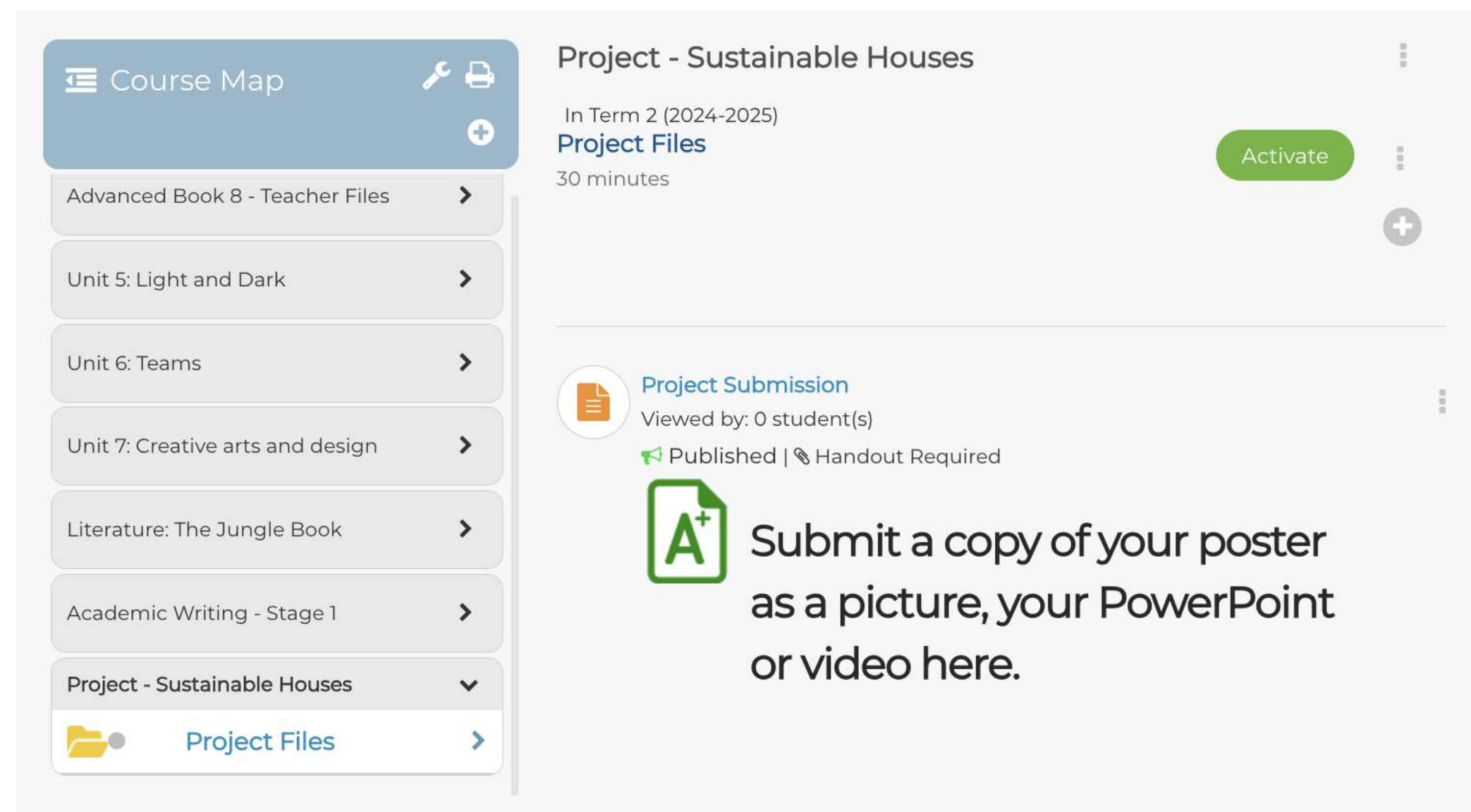
- ⦿ Create a poster or PowerPoint using Canva, PowerPoint, Google Slides or Classkick.
- ⦿ Look back at step 2 and 3.
- ⦿ Add that information to your poster, Powerpoint or video.
- ⦿ **DON'T WRITE TOO MUCH!**
- ⦿ **DON'T ADD THINGS YOU DON'T UNDERSTAND!**
- ⦿ **REMEMBER!** You will present your work with your group, you must understand the information you added.
- ⦿ Show the teacher your work before submitting it to LMS.



# Steps 5 & 6 : Upload to LMS & Present



- ⦿ Show the teacher your project before submitting it to LMS.
- ⦿ **Last day to submit the project on LMS is February 3rd!**
- ⦿ Present your project with your partners: everyone must speak about a part in English and answer a few questions. It should not take longer than 5 minutes.



# STOP and think!

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How were you able to work in the group? Check one.	<input type="checkbox"/> Beginning	<input type="checkbox"/> Developing	<input type="checkbox"/> Acquired
	I only spoke a little about the project.	I gave some ideas to the group and helped to come to decisions.	I gave many original ideas and I helped organize our work.
How can you improve your group work?			
How was your problem solving? Check one.	<input type="checkbox"/> Beginning	<input type="checkbox"/> Developing	<input type="checkbox"/> Acquired
	I found it hard to solve the problems. My teammates made all the decisions	I could see some of the problems and I tried to think of ways to fix them. Sometimes, I need help for making decisions.	I thought about different and original solutions and shared them with my team.
How can you improve your problem solving?			

# Last Check!



What was good about my project?

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1

What other skills have I improved? What skills do I still need to work on (e.g. time management, confidence, etc.)?

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3

Did I achieve my role? Am I proud of the work I did?

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5

What can you make better in my project?

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2

What have I learnt doing the project?

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4

Write a thank you note to yourself

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6

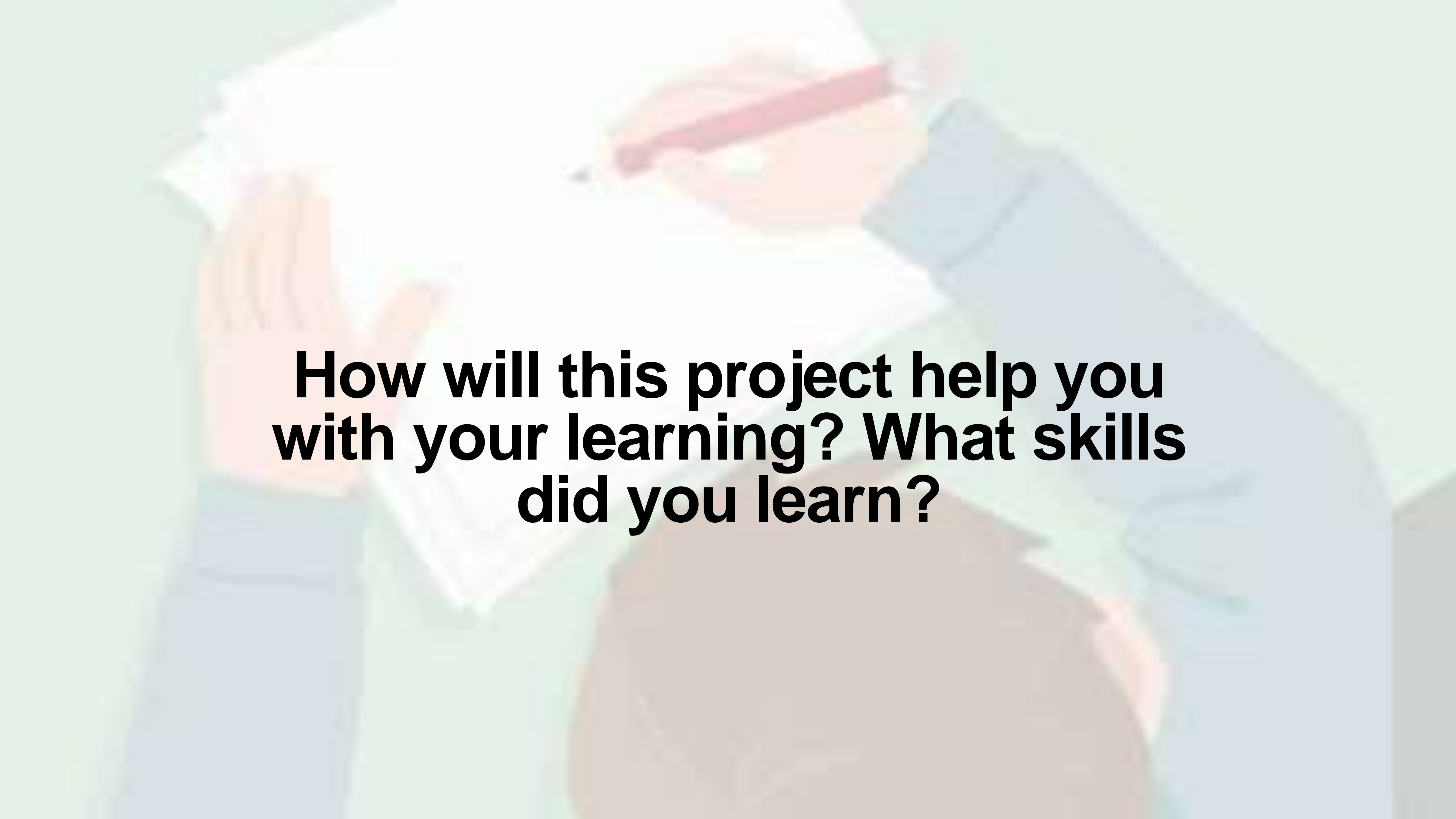
# Links

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Reading - <https://bluprint-onemega.com/architecture/concept/anatomy-sustainable-home/>

Kahoot - <https://play.kahoot.it/v2/?quizId=56e9b6d1-cb49-4805-993e-9e7d4a32f456&hostId=b41b5aa5-0e17-4c60-8d93-da422e18a97c>

Add more links to help your students research  
Use resources from the Big Green Lesson and Legacy

A close-up, slightly blurred photograph of a person's hands writing in a notebook. The person is wearing a blue long-sleeved shirt. Their right hand holds a red pen, and their left hand rests on the page. The notebook is open, showing white pages. The background is a soft, out-of-focus green.

**How will this project help you with your learning? What skills did you learn?**