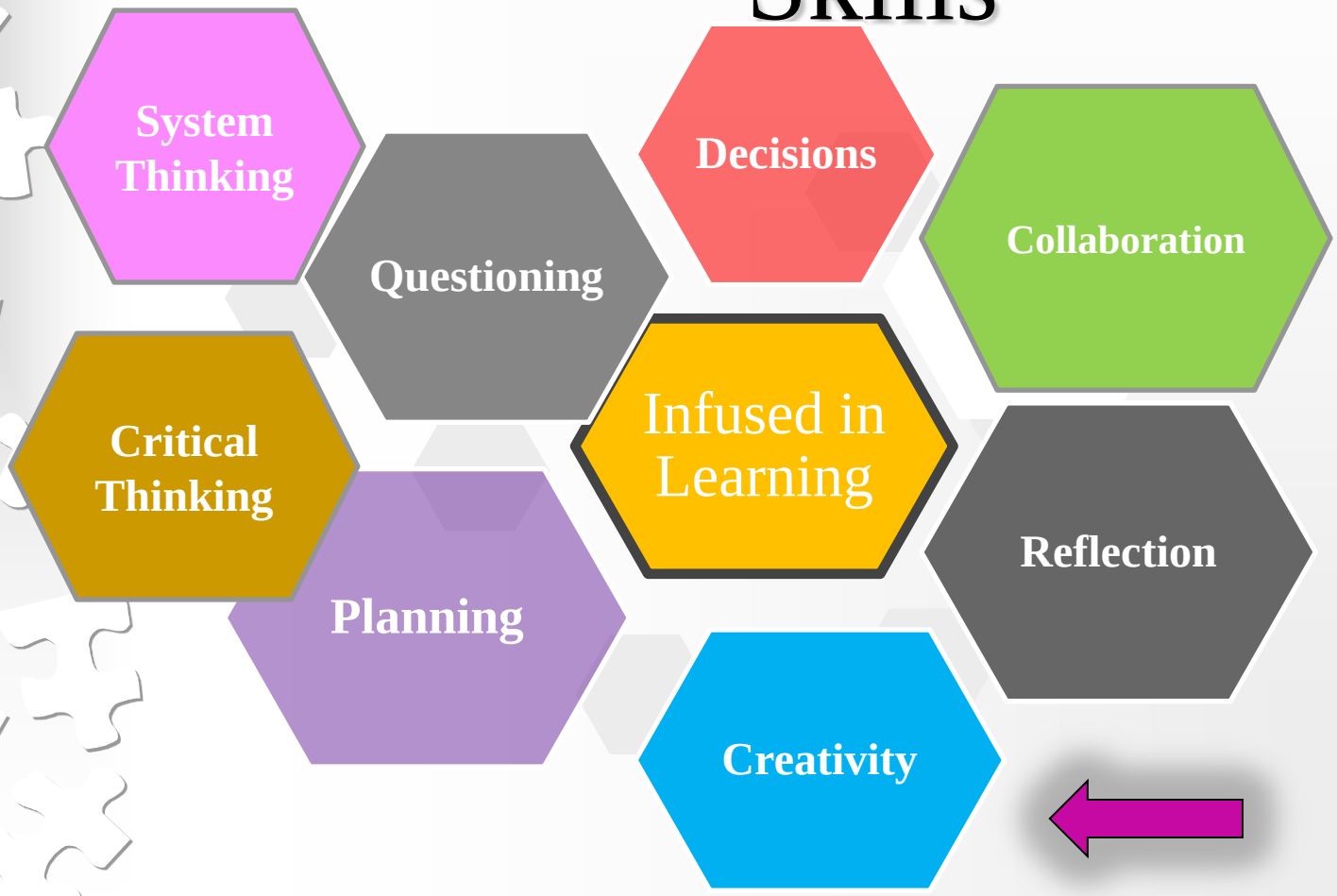
Module … Creativity

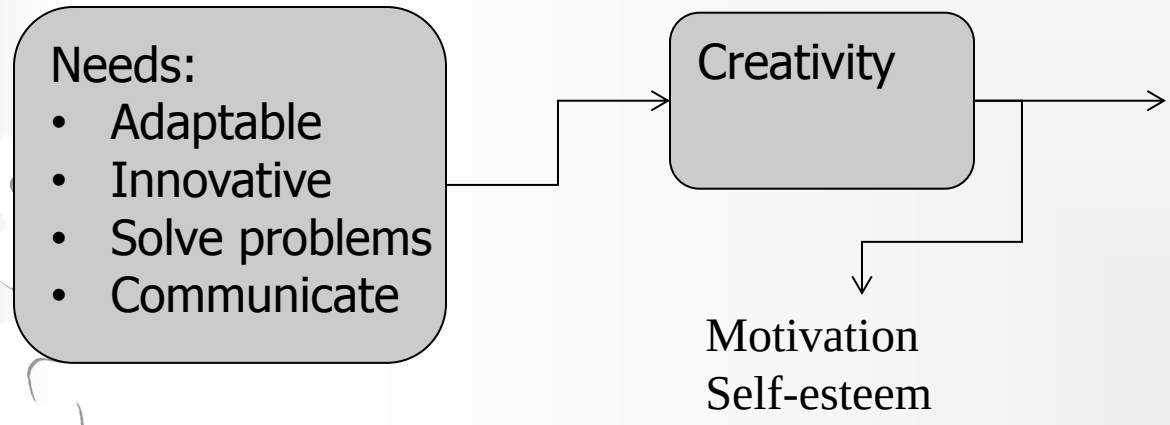
Objectives are:

- Having students see the **structure** and **fun** in using creativity techniques to learn.
- See how creativity is another tool in building exciting learning elements.

Learning Modules of Thinking Skills



Creative thinking is a powerful way of engaging children with their learning



Developing the capacity to be creative can enrich their lives and help them to contribute to a better society.

Module Design

- Background/ History
- Theory/ Content
- Examples
- Worksheets
- Sample Lesson plans

Cognitive Approach:

- Modeling
- Scaffolding
- Coaching
- Reflecting (Meta-cognition)
- Fading

Teaching strategies to support creative thinking across the curriculum

Any lesson can develop creative thinking if it involves pupils generating and extending ideas, suggesting hypotheses, applying imagination and finding new or innovative outcomes. Try to include opportunities for creativity in the lessons you teach. Look for evidence of pupils':

- using imagination
- generating questions, ideas and outcomes
- experimenting with alternatives
- being original
- expanding on what they know or say
- exercising their judgment

Make the conversation more relevant

Outcome:

- Have young students be able to engage in conversations using questions in a thoughtful and learning manner.
- Our students should understand the nature and make up of questions and how to use them in the learning/ conversation mode.

Background:

- A **question** is an expression of inquiry that invites or calls for a reply or an interrogative sentence, phrase, or gesture. http://www.thefreedictionary.com/question

- Isidore I. Rabi .. (Nobel Prize in Physics in 1944), says his mother would ask him each day when he returned from school **"did you ask a good questions today"** that made me become a scientist.

Learning to question to wonder to learn … Jamie McKenzie

Questions allow young people to make sense of their worlds and to take action smartly.

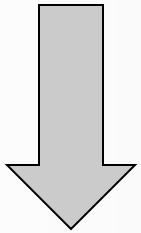
They are the most powerful tools we have for making decisions and solving problems-for inventing, changing and improving our lives as well as the lives of others.

What makes a question good?

- A good question makes you think.
- A good question is one that does not have an immediate answer, because it requires some thinking, feeling and application to previous knowledge.
- A good question opens doors. It demands more than a yes or no answer.
- A good question penetrates the structure and meaning of the knowledge base to seek understanding.

The Structure of Question

Open-ended questions are best for most learning situations, unless you have a particular reason for leading someone to a specific conclusion or actually need a fact supplied to you.



Try to avoid yes/no questions because they're usually a dead end. In contrast, open-ended questions:

Open-ended questions:

- invite opinions, thoughts and feelings;
- encourage participation;
- establish rapport;
- stimulate discussion; and
- maintain balance between facilitator and participant.

Exercise:

- Try playing **The Question Game** with your kids. To start, two participants decide on a topic to question. One person starts with an open-ended question, and then the other person responds with a related open-ended question. This goes back and forth as long as they can continue without making a statement or repeating a previous question. For example, the topic might be an object in the room, such as a light bulb:
  A: Why is it important to have light?
  B: Where does light come from?
  A: How does light help people?
  B: Where is light used?
  A: What would happen if there were no light?
  Try asking a question and going around the room, each person asking a question based on the one before.
- This game can be modified by picking different type of questions and seeing how many variations can be made. As an example you can pick the category of probing questions:

Content

Children learn their question-asking habits from teachers and parents. If children are to be encouraged to raise questions that lead to investigation, this is one more reason for teachers to make the effort to ask more productive questions and fewer unproductive ones

Modeling

- Provide a wide range of materials for children to respond to.
- Practice and improve your questioning style so that it provides an example for the children.
- Provide a climate of inquiry for children to work in.
- Encourage children to form and to discuss their own questions.
- Respond positively to children's spontaneous questions.
- Listen with respect to each question and the child.
- The atmosphere in the classroom must also be conducive to encouraging children to ask questions and learn from mistakes.
- Use “Think aloud” to introduce metacognitive language

Coaching

- Once children begin to ask questions they will ask ones of all kinds; some will be difficult for teachers to handle, but it is important to find a way of doing so that does not make the child wish he or she had not asked. A strategy should be created for analyzing children's questions so that unproductive ones can be used productively.
- **We** should be asking our students , what questions do we need to ask of this situation. Whenever we encounter complex situations in our subjects, we pose certain crucial questions:
- What do we know?
- What are the givens?
- What do we need to find out?

Scaffolding

Posting a list of metacognitive questions on the wall can help to remind children of the sorts of questions they can ask themselves, for example questions that **assess awareness of learning** (What have you learnt? What have you found out? What did you find hard? What did you do well? What do you need to learn/do next?),

assessing attitudes and feelings (What do you like doing/learning? What do you feel good/not good about? What do you feel proud of?)

setting targets (What do you need to do better? What would help you? What are your targets?)

What other Scaffolding can we do?

- Break group up
- Using creative skills develop a list
- and then report back to others

What thinking skills did we use?

Insightful questions-1

Insightful questions indicate that a student has an idea or a problem on which she is working, and wants to learn more about it. The student wants to explore and broaden his ideas. Exactly what is it that such a student wants to learn? Facts are not usually what he wants to learn. More typically, she wants to learn about implications and alternatives, suggestions about his planned approach, different ways of looking at a problem, and so on. He wants someone to help him think through his ideas or problems on his own.

Insightful questions-2

The role of the teacher/parent during the questioning process is to help the student see the shortcomings in his thinking.

- It is to open her eyes to alternatives,
- erroneous assumptions,
- and eventualities he has not considered.

It is, most of all, to **challenge the student to develop a deeper understanding of his own knowledge**. In order for the student to gain such an understanding, **she must experience expectation failure.**

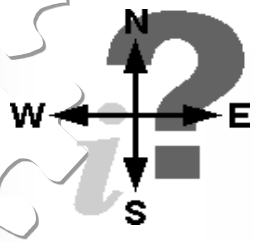
A teacher should aim to provide the questions that will lead the student into the understanding cycle.

Insightful questions-3

- Asking questions at the right time is a critical role of a good teacher. This statement summarizes what we call the sounding board model of teaching.
- When teachers adopt the role of sounding boards, they should allow students to:

1. **speculate**
2. **wonder**
3. **imagine**
4. **be creative**

Worksheets



Sample Lesson plans

- **Application of good questions…Leading a Discussion**
- **Showing children how to form questions**

(It's breaking questions into categories to obtain more information, like the parts and the whole, a system view of developing questions)

Think-Puzzle-Explore

- What do you think you know about this topic?
- What questions or puzzles do you have about this topic?
- How might you explore the puzzles we have around this topic?

Reflection and Thank you