Problem Solving

Use this Learning Guide after viewing

🎥 **Problem Solving – Thinking Outside the Box!**
www.bit.ly/competencyvideo8

Questions for Reflection and Discussion:

- Think of a recent experience that required problem solving. Drawing upon your own experience, why is the development of this competency important?
- How can a focus on problem solving help students achieve the learner outcomes? How might it apply and/or look different in your subject area and grade level?
- What strategies and approaches have you incorporated in your program to support student development of problem solving?
- What type of classroom environment supports problem solving?
- How might we adapt our practice to guide students at various levels of readiness to develop this competency?
- How might we guide students to approach this competency with a growth mindset, value mistakes and the analytical process, rather than be solution-focused?
- How might we model behaviours, ways of thinking and language in order to integrate this competency in our daily practice and help students practice metacognition?
- Brainstorm examples of what feedback would look like/sound like to foster student growth in problem solving.
- How do we foster determination and resourcefulness and instill in our students an appreciation of problem solving abilities?

For more information:

Embracing the F Word: Using failure to build resilience and motivation at school, Reachout.com
'Watch Whats Working: Carol Dweck Talks Growth Mindset, Edutopia
Developing a Classroom Culture That Supports a Problem-solving Approach to Mathematics, NRICH enriching mathematics
Gold Standard PBL: Essential Project Design Elements, Buck Institute for Education
Famous Failures video, Motivating Success, YouTube

Sample Strategies for Educators:

- Model and use problem solving skills, attitudes and vocabulary in your classroom.

- Create a culture where mistakes are valued as an important part of learning.

- Support a growth mindset by encouraging students to take risks, embrace challenges, set goals and develop persistence.

- Engage students in solving open-ended questions to create opportunities for thinking outside the box.

- Invite students to engage with real world problems where students ask questions, conduct research, synthesize information, and draw their own conclusions.

Sample Student Learning Tasks

- Identify- the nature of a problem

- Explore- information relevant to a problem

- Consider- a variety of solutions

- Choose- methods, procedures or tactics

- Evaluate- solutions