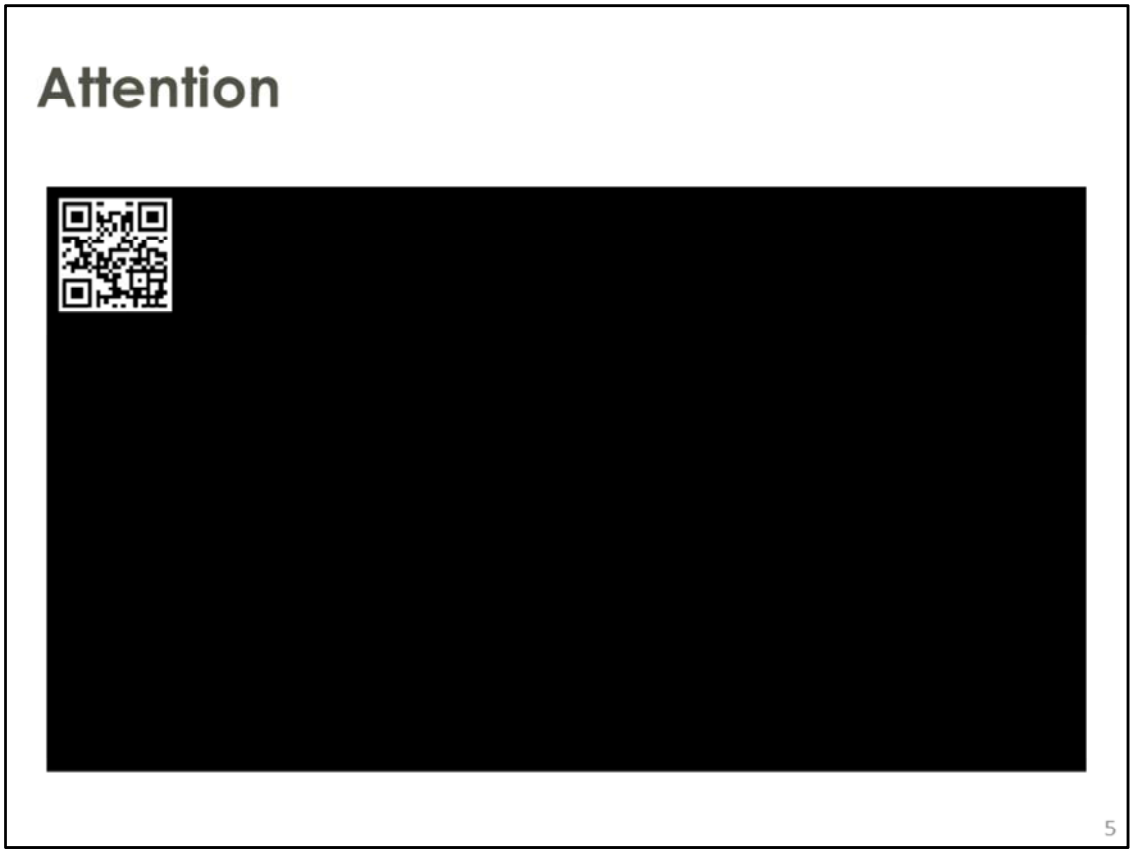
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Example slides including lesson planning info

LOAFS structure
+ homework assignment



LEAD-IN

Intructions:

1’30 video with subtitles, follow instructions from the video

Debriefing Q:

1-how many spotted the gorilla?

-> check if around 50% as presented in the research

2-from those who had spotted the gorilla, how many did see the player go out and the curtain changing color?

Explanation:

Example of **“inattentional blindness”**

= failure to see something when we don’t pay attention to it - selective focus + conscious effort

= when we pay attention to some things, we miss other things

Why? Attention is the first process involved in learning.

Goals

At the end of this presentation, you should be able to:

- List the thinking skills that we want science and engineering students to develop
- Explain what cognitive processes are involves in problem solving
- Make the 4 steps of Polya's problem solving method explicit when you present solutions
- Define what is transfer and explain how it can be facilitated
- Help your students monitor their work by making them reflect on their learning

Preparing for using a board

1. Prepare a one page on-the-board summary presentation of your thesis, thinking about structure and use of space

2. Exchange your page with your neighbor – without explaining the content – and give each other feedback:
   - Is the structure identifiable?
   - How is space used?

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ACTIVE LEARNING example 1

Think - 5 min.:

Think about your presentation from the afternoon:

- if on slides, prep a board version
- if already a board version, summarize and think about the structure and zones

Pretend your board is your A4 paper sheet, write down what you will write on the board

Pair - 8 min.:

Exchange sheet with neighbor, don't explain

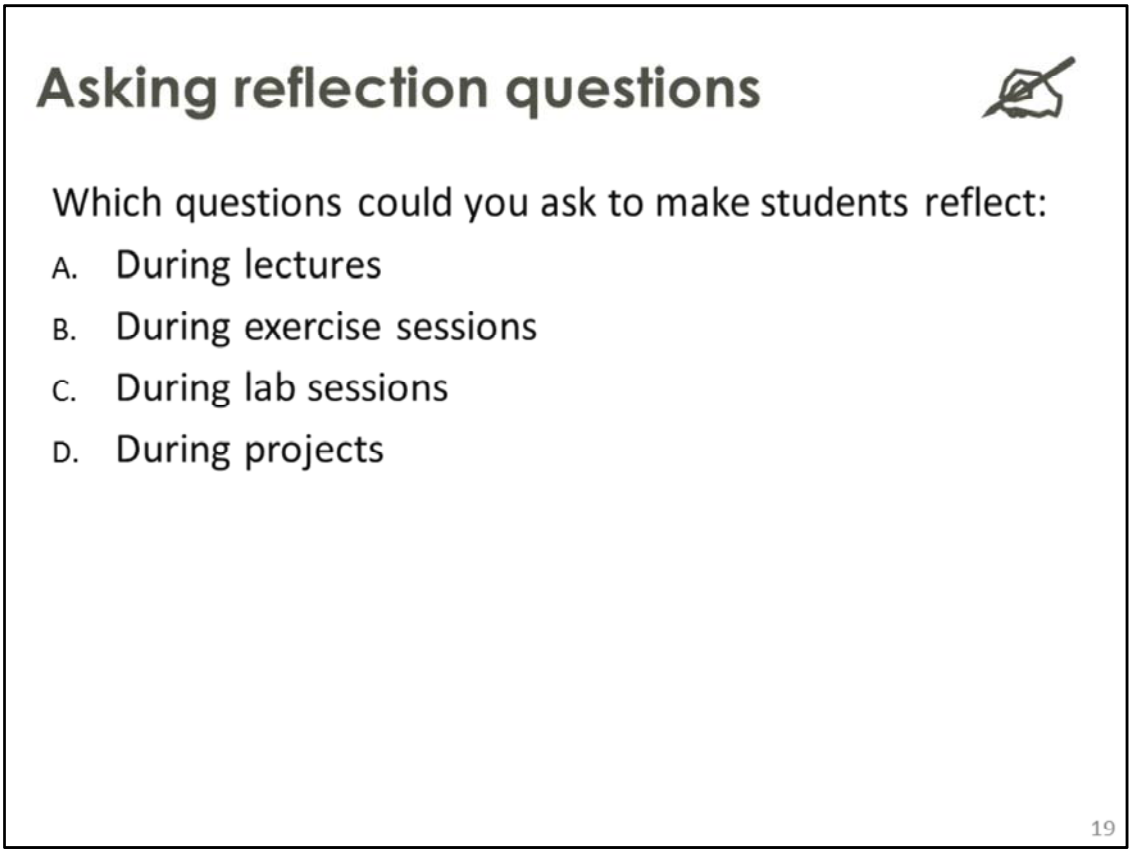
Give feedback on structure + use of space – cf. best practices slide as criteria

Share – 3 min.:

Question: great practices you have seen from neighbor that you would like to "borrow"?

Conclusion:

- the process vs. the result
- Importance of preparing



ACTIVE LEARNING example 2

Intro:

The example questions we have seen are very generic.

Reflection question can also be adapted to more specific contexts to help students monitor their learning e.g. identify steps in reasoning, identify important points in knowledge

Could you create examples of questions adapted to these different situations?

Buzz groups with 4 groups, 1 situation per group

<u>Phase 1 – collaborative work – 5 min.:</u>

Instructions:

As a group design reflection questions which would be specific to this situation

It can help to think about particular examples, e.g. the exercises on kinematics you have supervised last week

Be ready to share your questions in plenum

<u>Phase 2 – debriefing in plenum - 5 min.:</u>

Prepare board with 4 situations

Ask each group a question in turn * 3 times

Write examples on board

Check:

- Are the questions open
- Moment at which they are asked

Check your learning

Draw the model of the memory presented in this talk:

List practices that can be used in lectures/presentations to:

1. Draw attention:
2. Make information processing easier:
3. Facilitate memorization:

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FORMATIVE ASSESSMENT
2 minutes
Debriefing:
- Compare with the summary provided
- Link back to learning outcomes from the beginning
- Emphasize how it prepare for transfer (preparing for application)

Summary

What are the 3 most important things you have learned during this session?

What strategy(-ies) do you want to try when presenting?

Is there anything you did not understand?

1 minute
Debriefing: check if there are points not understood

Homework assignment

Reflection question: What issues do you see in applying what you have learned in the lesson to your own teaching?

Practice:

1- Analyze your mini-lesson plan for tomorrow:

- Have you included learning outcomes?
- Have you included one learning activity?

2- Design 1 reflection question that you could include in your mini-lesson

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Instructions:

- Give deadline
- Concrete outcome upload on moodle