

3.3.2 Six thinking hats

Brief description, and rules of the implementation of the learning activity

De Bono's thinking hats (Edward de Bono's Six Thinking Hats) are a thinking technique that helps to look at a problem, idea or situation in different ways. Each "hat" represents a particular way of thinking. This makes it easier for children (and adults) to organise their thoughts and reflect together without confusion or discussion. This method is very good to use in the design process or Design Thinking, especially in reflection and collaboration. It can be used both indoors and outdoors. Both surroundings have specific and different activities and real-live problems for students.

Skill focus

Primary Skill Focus

- Problem-solving

Complementary/Secondary Skill Focus

- Critical thinking
- Creativity
- Empathy

Age group	Student number	Duration
6-10 years old	Individual and whole class working in pairs or small groups	25-50 minutes

Proposed step by step implementation of the learning activity

Before the lesson or activity:

1. Preparation

- Choose a topic. For example: a design idea, a group assignment, a class problem, or the evaluation of a project.
- Make the thinking hats visible
- Use real (coloured) hats, paper hats, cards, or hat posters with pictograms.
- Make the colours stand out well (e.g. yellow sun for the yellow hat, cloud for the blue hat).
- Explain the meaning of each hat
- Keep it simple and visual. Let children give their own examples for each hat. You can practise this with a playful topic.

During the lesson or activity:

2. **Choose the topic or question:** Decide what you want to think about with the students. This could be a problem, an idea, a situation or a project. The topic can be anything and may vary per lesson or group.

3. **Explain the thinking hats:** Introduce the six thinking hats to the class, briefly mention what each colour means and in what way the hat is used. Make sure students understand the different perspectives.
4. **Use the thinking hats one by one:** Walk through all the hats together with the class. Encourage pupils to share their thoughts, feelings or ideas about each hat. This can be done verbally, through drawings, with post-its or other creative ways.
5. **Ask targeted questions for each hat:** Use open-ended questions that match the colour of the hat to guide thinking, for example:
 - Facts and information (white)
 - Feelings and intuition (red)
 - Critical points and risks (black)
 - Positives and opportunities (yellow)
 - New ideas and alternatives (green)
 - Process and planning (blue)
6. **Discuss and evaluate the outcomes:** Summarise what was said in each hat and discuss with students what this means for the topic or next steps. Have students reflect on the use of the hats and what they have learned.
7. **Apply the method flexibly:** Depending on the aim and the group, you can choose which hats to use and in what order. Sometimes fewer hats are enough, or you can repeat them with new topics.
8. **Integrate the thinking hats regularly into classroom practice:** Use the thinking hats in various activities such as brainstorming, group discussions, problem solving, reflection moments and decision-making to practise structured thinking.

Indoor/Outdoor Classroom layout notes

It can be used both indoors and outdoors. Both surroundings have specific and different activities and real live problems for students.

When indoors ensure that the (class-)room is quiet enough to allow focus and thoughtful discussion and explanations during research. If practiced outside, choose a quiet corner of the playground where students can stay focused and avoid interference.

How does this learning activity develop this particular skill?

Before the lesson: preparation

Visualising thinking hats helps children to recognise and use different ways of thinking. By choosing the right topic (e.g. a classroom problem or design question), thinking is immediately linked to a real challenge.

During the lesson:

1. Choose a topic or question
 - By choosing a specific problem or situation, you activate problem-oriented thinking.
 - Children learn that problems have different sides and that you can examine them systematically.

2. Explain the thinking hats

- Each hat represents a specific thinking style:
 - o White: gathering facts
 - o Red: feelings and intuition
 - o Black: risks and objections
 - o Yellow: advantages and opportunities
 - o Green: creative ideas
 - o Blue: overview and planning
- Children learn that problem solving does not require a single way of thinking, but a combination of perspectives.

3. Use the hats one at a time

- By exploring each perspective separately, children learn:
 - o To think systematically
 - o To use multiple angles
 - o To collaborate and listen to others
- This promotes flexible and analytical thinking.

4. Ask specific questions for each hat

- Open questions encourage deep thinking and evaluation of ideas.
- Children learn:
 - o To look critically at facts (white)
 - o To assess risks (black)
 - o To come up with creative solutions (green)
 - o Seeing positive aspects (yellow)
 - o Reflecting on the process (blue)

5. Discuss and evaluate the results

- By reflecting together, children learn to:
 - o Draw conclusions
 - o Weigh up solutions
 - o Substantiate decisions
- This is a core skill in problem-solving thinking.

6. Apply and integrate flexibly

- Regular use of thinking hats makes structured thinking a habit.
- Children learn that problem solving is a process that can be practised and improved.

7. Role of the teacher

- Encourages thinking, asks probing questions and provides a safe environment in which children dare to think.
- Does not provide answers but guides the process so that children arrive at solutions themselves.

What do we want to achieve regarding primary skill development (student understanding and/or behaviour)?

Using De Bono's thinking hats in the classroom stimulates problem-solving thinking in a playful and structured way. This form of work teaches children not only to react spontaneously, but also to think consciously from different perspectives.

As a result of this activity, students will:

- able to examine problems from multiple perspectives and understand that there may be more than one valid solution.
- understand to separate emotions, facts, and ideas in order to think more clearly and systematically.
- able to approach problems step by step, moving from understanding the problem to critical analysis and creative solution-finding.
- able to analyse problems by identifying what is happening and why and reflect on their own thinking by comparing it with the ideas of others.
- understand to evaluate what works and what does not.
- able to distinguish facts from opinions or feelings.
- able to make informed decisions by considering and choosing between different options.
- able to generate multiple, original, or unexpected solutions to a problem.
- be aware the needs and perspectives of others into account.
- able to listen actively to others.
- able to express their own ideas clearly.
- able compare different viewpoints respectfully and without judgment.

Suggested use, and practical subject-related examples

This creative problem-solving technique can be used in any lesson whenever students need to interpret a given situation, examine it from multiple perspectives, solve a problem or situation, make a decision, and so on. Such a lesson situation can be incorporated into any class.

In the following, we will introduce how to incorporate the "six hats" technique into the classroom:

1. **Introduce the topic:** 'We are going to discuss our idea for the schoolyard with the six thinking hats.' Explain what you are going to think about and what the actions are. Divide the class in small working groups

Make the thinking hats-scene visual in the classroom and make the six coloured hats (or cards) available to the whole class

Hat	Question you ask	Sample activity
 White (facts)	What do we already know?	Write down or draw information
 Red (feelings)	What do we think or feel?	Let children choose or draw an emoji
 Black (critical)	What doesn't work well?	Put a cross by what might be tricky
 Yellow (positive)	What's good about it?	Have children draw a sun by their idea
 Green (creative)	What else can we think of?	Brainstorm on paper or with LEGO/blocks
 Blue (overview)	What should we do next?	Have children make a roadmap or divide tasks

- Think for each hat (one at a time):** Walk step by step through each thinking hat. At each hat, give children space to share their opinion, idea or feeling - verbally, on a post-it or via a worksheet. Children present their idea for the playground with their group. Every student expresses their opinion, feeling, vision or possible solution to each hat
- Reflect together:** Discuss briefly what you have learned. For example:
 - ‘What did we discover by thinking like this?’
 - ‘What idea do we want to develop further?’
 - ‘What did you find difficult or fun about this way of thinking?’

Materials and tools needed for implementation

- Visual representation of the hats (mandatory)
 - Coloured hats (real hats, paper hats or headbands)
 - Thinking hats posters (one per colour with meaning in words and pictures)
 - Cards or sticker sheets with the colours and matching symbols
 - Digibord slides or printables to visually support the meaning
- Work-form materials for students
 - Worksheets per hat (draw, write, colour, fill in)
 - Post-its or coloured papers per hat colour (for brainstorming or feedback)
 - Emoticons or smiley cards (for the red hat)
 - Reflection cards or talking boards
 - Colour pencils or markers in the six hat colours

3. Basic classroom supplies

- Large sheet of paper or flap chart for shared mind maps
- Valuable free and open-ended materials, craft materials for creative elaboration (e.g. green hat - creative thinking)
- Timer or hourglass (for structure per hat)

Guiding questions

Questions depend on which hat is talking, for example:

- White hat - Facts and information - What do we still need to find out to understand it better?
- Red hat - Feelings and intuition - Do you think this is nice, difficult, exciting or fun? Why?
- Black hat - Critical thinking and risks - What could go wrong?
- Yellow hat - Positive thinking and opportunities - What could this mean for someone?
- Green hat - Creative thinking and new ideas - What could you do differently?
- Blue hat - Overview and reflection - Which hat do we use now and why?

Tips and Tricks for dealing with challenges

- **Challenge:** Children do not always understand abstract thinking hats very well at first.
Tip: Make it visual and concrete
 - Use clear colours, pictograms and simple language.
 - Hang visual posters or work with real hats or headbands.
 - Child-friendly explanations work better than theory.
- **Challenge:** Too many hats at once confuses younger children.
Tip: Start with 2 or 3 hats (e.g. white, red, yellow) and expand slowly.
 - Less is more, especially in the beginning. Build it slowly
- **Challenge:** Children don't know how to think properly at a particular hat this requires training and repetition. As a teacher, think out loud: 'When I think with the black hat, I see that...'.
Tip: Give example-thinking
 - Modelling helps tremendously in thinking development.
- **Challenge:** Some children are afraid to speak out or follow others.
Tip: Alternate classroom and individual
 - Let children draw or write individually first and only then share. This way each child gets thinking space.
- **Challenge:** Children quickly lose the thread in the process.
Tip: Use fixed routines. Therefore, work with a fixed rhythm, e.g.:
 - Choose hat
 - Ask question
 - Share answer
 - Repetition builds confidence.
- **Challenge:** Children lose focus in long sessions.
Tip: Keep it short and energetic
 - Use a timer per hat (e.g. 3 minutes per line of thinking) and make sure there are active forms of work (drawing, moving, choosing cards) this ensures more involvement.

- **Challenge:** Children often only want to think positively (yellow) or creatively (green).

Tip: Encourage all thinking, including the 'difficult'

- Explain that all hats are important - including critical thinking or allowing for feelings.
- Use examples where the black or red hat makes a difference.

Difficulty level tailoring

To tailor working with the thinking hats to pupils' level, you can differentiate into three levels:

- **Beginner learners (6-7 years old):** students explore one or two thinking hats at a time, with a lot of support from the teacher. The questions are simple and visual, and answers may also be drawn. Thinking aloud together is central.
- **Advanced learners (8-9 years old):** students use several thinking hats in succession. They think independently, share their ideas in groups and write or draw their answers. The teacher guides mainly by asking questions and reflecting together.
- **Expert learners (9-10 years old):** students use all six thinking hats independently or in groups, also with more complex topics or their own projects. They consciously switch perspectives, ask each other in-depth questions and reflect critically on their thinking process.

This structure makes it possible to build thinking skills step-by-step, tailored to the pace and level of the children.

Debriefing and Reflection questions

1. On thinking itself
 - Which hat did you find easiest to think with?
 - Which hat did you find most difficult? Why?
 - Did you think or say something you wouldn't normally do?
 - Which hat helped you come up with a new idea?
2. About the process
 - How did you feel about thinking step by step?
 - What happened when we started thinking with a different hat?
 - Did we get a good look at all sides of the problem?
 - What was the difference between creative thinking and critical thinking?
3. About empathy and collaboration
 - What did your group do well while thinking?
 - Did you listen to each other well?
 - Who helped you to think further?
 - What would you do differently in the group next time?
4. About learning and growth
 - What did you learn about yourself as a thinker?
 - Is there anything you understand better now than before?
 - How can you use this thinking in other situations?