

Possibilities for use in competency-based lessons:

Kompetenzen, die beim Bau und der Arbeit mit den Farb-Drehscheiben erworben werden können:

- deliberately choosing materials, describing them, and using them variedly whilst considering technology and function.
- introducing and developing own design ideas with drawings, especially with view to speed and direction of rotation of the wheels.
- experimenting with the coloured discs (developing their own design elements)
- changing the design of the mounting device, eg converting the stationary version to a transportable variation.

Suggestions for the use of the material in lessons:

1. Using the building project as an example, (student construction of a colour turntable design that has been partly built by the teacher) consider how the direction, speed or function of the turntables can be varied.
2. Develop a structure to support and move the coloured turntable by either using your own design or the given instructions (agree a split of work depending on motor abilities either as single partner or group project: fitting of the construction base, connecting the wheels to the axles/ designing the discs).
3. Examine, change and compare the belt drive variations by simply changing the positions of the wheels.
4. Examine the optical impact of the disc patterns and add your own designs.
5. With different models: compare the self-built constructions at the end of the lesson and explore differences (speed, direction of rotation, appearance of the coloured discs). Arrange an exhibition of the different models

Didactic background: Technical Education

It is important in terms of successful technology education that each time children express the knowledge they already have in assumptions and drawings (direction of rotation, speed). After the experiments these assumptions are compared and evaluated with the observations and results. Self-developed solutions are preferential to given ones. Hence the instructions are only one option to ensure that the construction of the coloured turntables will definitely succeed. Variations are expressly welcomed, the materials included offer a choice of model variations.