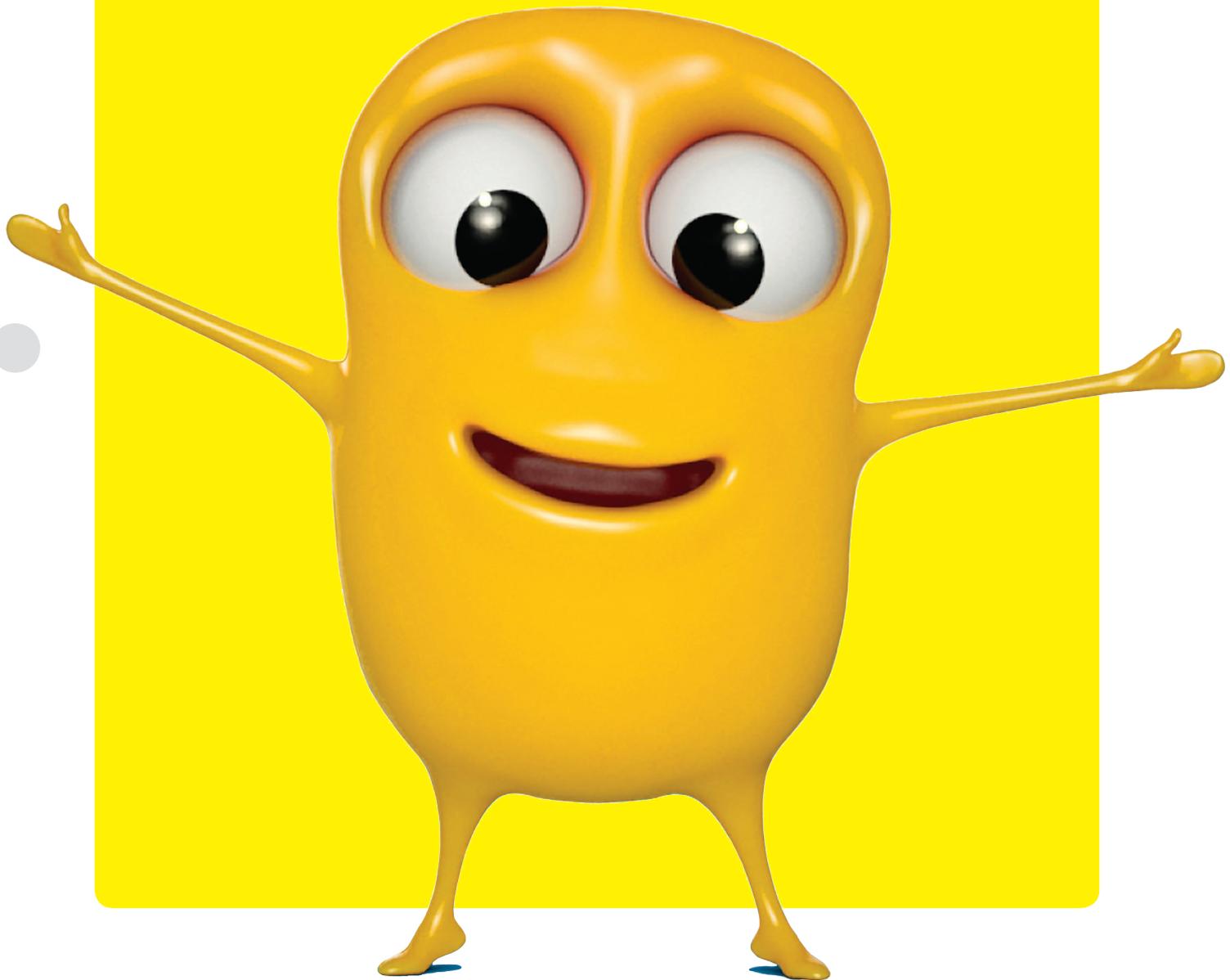


Tips for teaching geography to visually impaired students



Why adapt lessons for visually impaired (VI) students?

This 90-second video youtu.be/O7j4_aP8dWA demonstrates how much learning is visual and how much audio description is required to make content accessible.

With a few adaptations, VI students can participate fully, understand geographical locations and skills, and learn independently.

General tips

- Always speak to students about what would best help them and how their needs might change over time. They are the experts of their own sight condition and can help you work out the best solution.
- Download **General tips for teaching visually impaired students** from www.macularsociety.org/teaching for introductory information including lighting; emotional support; formatting documents; assistive technology; techniques such as hand-over-hand guiding and further sources of information that have been used to create these resources.

Strategies for adapting geography lessons

Sound, touch, feel and smell

VI students rely on other means of communication such as sound, touch, feel and smell. Olfactory sense has strong memory associations, which can be used in geography to establish a location in a student's mind. Teachers and support staff should use objects to convey geographical skills and locations - these techniques can go some way to help a student who is not able to learn by sight.

- Use tactile displays, graphs, maps, models, pictures and audio devices to give information.
- Use smell and touch to establish locations – for example, scents for seaside, meadows, woods and different countries.
- Use relief models, especially when teaching contours or map coordinates.
- Encourage students to feel different types of rocks and minerals to explore how their weights, texture and structure differ.

Teaching strategies in the classroom

In thinking how to support a student with visual impairment teachers should consider ways to make their subject more hands-on and accessible. You could make teaching more accessible using the following strategies.

- Arrange the classroom so that the student can find what they need for a lesson, e.g. maps, models, tools and equipment.
- Use the school building as a tool for geography – use a 3D printer to make a model of the school which a VI student can explore.

Field trips and visits

- Discuss the plan for any field trip to the student privately so that they can ask relevant questions.
- Buddy the visually impaired student with a sighted person (maybe a support worker) who understands their needs.
- In planning a field trip make use of tactile maps and audio devices for description and direction.
- Guide students to the objects to study such as rocks, landscapes, models and maps.
- Give lots of time for the visually impaired student to explore any objects, maps or displays.
- Describe landscapes in detail and include how objects relate to each other – for example, ‘Next to the pond is the village green,’ or ‘The streets are narrow and crowded with lots of people and street furniture.’

Assistive Technology

Using Assistive Technology (AT) in geography gives VI students access to more information when learning – here are some of the best pieces of AT for geography.

- Tactile markers with a talking pen are useful for giving instructions when learning to map read.
www.talkingpen.co.uk/pen-technology
- Talking tins or a similar tool for short messages on a journey.
www.unforgettable.org/talking-tins-magnetic-talking-reminder?gclid=CJ2y8v-89NMCFaa77QodolAMeA
- Useful apps such as the talking atlas map.
www.pathstoliteracy.org/technology/talking-atlas-app
- Virtual Reality (VR) is becoming cheaper all the time, and many schools have bought class sets of Google Cardboard headsets. VR headsets give VI students a unique individual insight into places around the world. Use ear pieces or headsets so that the sound becomes the main source of information, and beware of sensory overload.
www.vmistudio.com/esight-the-virtual-reality-tool-giving-sight-to-the-blind

- Headsets have even been used to create virtual field trips.
www.vmistudio.com/esight-the-virtual-reality-tool-giving-sight-to-the-blind
- GPS and wearable technology are developing in ways which could have implications for VI people – a mobile phone’s GPS can send a vibration to a Fitbit on the user’s wrist that signals their arrival.
www.theguardian.com/teacher-network/2015/jul/28/wearable-technology-classroom-virtual-reality
- This article describes smart shoes which vibrate with a GPS signal.
www.cnet.com/uk/news/bluetooth-smart-shoes-vibrate-you-in-the-right-direction
- Google maps can give audible directions to a given destination.
- Speech recognition tools like Siri, Cortana and the Google Assistant can be useful in researching geographical skills and locations.

In this series:

- **General tips** for teaching visually impaired (VI) students
- Tips for teaching **art** to VI students
- Tips for teaching **design technology** to VI students
- Tips for teaching **geography** to VI students
- Tips for teaching **history** to VI students
- Tips for teaching **ICT** to VI students
- Tips for teaching **literacy** to VI students
- Tips for teaching **mathematics** to VI students
- Tips for teaching **music** to VI students
- Tips for teaching **science** to VI students
- Tips for teaching **sport** to VI students
- Tips for VI students on **school trips**


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