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Meet the zebrafish

The zebrafish as a powerful research tool for scientists of today and tomorrow

Aims: Firstly, to introduce our children to the fabulous world of science and learn about biology. Ultimately, to raise awareness to their families on the importance of biomedical research for studying human genetics and disease.

Key facts:

- as a vertebrate, the zebrafish has the same major organs and tissues as humans. Their muscle, blood, kidney and eyes share many features with human systems.

- zebrafish have a similar genetic structure to humans. 84 per cent of genes known to be associated with human disease have a zebrafish counterpart.

- zebrafish embryos are nearly transparent and develop outside the mother's body which allows researchers to easily examine the development of internal structures. Every blood vessel in a living zebrafish embryo can be seen using just a low-power microscope.

- zebrafish have already been used to help unlock a number of the biological processes behind muscular dystrophy and other diseases such as cancer.

- zebrafish have the unique ability to repair heart muscle. For example, if part of their heart is removed they can grow it back in a matter of weeks. Scientists are working to find out the specific factors involved in this process to see if this will help us to develop ways of repairing the heart in humans with heart failure or who have suffered heart attacks.

Activities for the children: Visualize a living fish embryo under a fluorescence microscope and see its heart beating and the blood running through its vessels.
Use drawings to record what has been observed.

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