

# Understanding Cancer:

## How does cancer start and spread?

### Summary

---

Cancer is a disease of the cells. There are many different forms of cancer that effect different parts of the body. However, the different types of cancer are all very similar in how they start and spread throughout the body's tissues. Cancer occurs when cells grow in an uncontrollable way. The cancer can spread into other parts of the body as these abnormal cells damage or invade surrounding tissues. Cancer cells in an effected tissue will show a higher incidence of cells undergoing cell division. In comparison in an unaffected tissue, there will be a lesser number of non-cancerous cells participating in cell division.

The activity will provide students with a better understanding of how cancers start and the impact these abnormal cells have on other tissues when they spread throughout the body. This knowledge is exercised further as the lesson plan focuses on melanoma cancer. There is a high prevalence of melanoma cases in Australia. Therefore, it is important to educate students on the workings and aggressiveness of this type of cancer.

## Curriculum Outcomes: Victorian Curriculum F-10

---

Levels 9 and 10

### Science Understanding: Biological Science

- Multicellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (VCSSU117)

### Science Inquiry Skills:

- Planning and Conducting: Select and use appropriate equipment and technologies to systematically collect and record accurate and reliable data, and use repeat trials to improve accuracy, precision and reliability (VCSIS136)
- Recording and Processing: Construct and use a range of representations, including graphs, keys, models and formulas, to record and summarise data from students' own investigations and secondary sources, to represent qualitative and quantitative patterns or relationships, and distinguish between discrete and continuous data (VCSIS137)

## Target Audience

---

Students in Year 9 and 10

## Duration of Activities

---

The activities would take 2 hours to complete all together. Or within two split sessions. Activities 1-4 in the first session and activity 5 and the extension in a following session.

## Learning outcomes

---

The worksheet introduces the abnormal division of cells involved in the formation of cancer. Students will partake in activities that primarily focus on cancer cells in the body. They will be concentrating on identifying the characteristics of a cancer cell in comparison to a normal body cell and using this knowledge to build further upon their understanding of different type of cancer in the human body.

## Copyright and Creative Commons

---

The moral rights of the authors, Kieran Lim, Ian Bentley, Peta White, John Long and Maria Vamvakas, with support from Michael Arnold, Stella Baziotopoulos, Mika Sutawan, Arya Kutti and Josie Lam (as part of the Community Science Project – 2018) have been asserted under the Australian Copyright Act 1968 (Cth). Excepting logos, trademarks or other third-party content as indicated, this resource is distributed under a Creative Commons 'Attribution-Non-Commercial-Share Alike' 4.0 international License.

