**Stage 1 Geography**

**Theme 3: Contemporary Issues**

Local Issue: ***An Australian Nuclear Future?***

1. Using ArcGIS and/or GoogleMaps, construct a map that allows us to choose the optimum location of a nuclear power station in South Australia. Discuss the reasons for your choice based on your understanding of the energy market and research into resources. Justify each of the location criteria used.

The location criteria are the following;

1. More than 100 km from centre with a [population over 10,000](https://en.wikipedia.org/wiki/List_of_places_in_South_Australia_by_population)  Port Lincoln, Port Augusta, Adelaide, Mount Gambier (A safety distance)
2. Less than 200 km from Adelaide (to reduce costs of cabling/distribution of electricity).

<https://www.electranet.com.au/what-we-do/network/vision-for-our-network/>

1. Within 10 km of a main road (for ease of construction supplies/workers etc) buffer road NEAR to chosen sites
2. 20km from a 132kV (or greater) transmission line
3. Within easy reach of coast (for cooling and transporting waste)
4. Any extra infrastructure needed for your chosen site and why?

2. What are the requirements for safety in different countries? How do governments convince the public that these are safe? Based on current estimates for electricity generation, suggest reasons for and/or against introducing a nuclear power station into the grid (base this on current supply and demand for electricity in the Australian context. Make sure you use current price data and actual figures.)

3. Should Australia pursue a Nuclear future? Give your opinion based on your research. (500 words max)

**Assessment conditions:** Map and report or multimodal presentation up to 800 words or 6 minutes in length.

Performance standards for Geography  
Stage 1

Downloaded from the online subject outline

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| - | Knowledge and Understanding | Analysis and Evaluation | Application |
| A | Comprehensive knowledge and understanding of geographical concepts.  Comprehensive knowledge and understanding of natural, built, economic, and/or social characteristics of places. | Insightful analysis of the interactions between, and interdependence of, people and environments at local, national, or global levels.  Comprehensive analysis and evaluation of information to determine possible outcomes, make justifiable recommendations, and form conclusions. | Purposeful and well-considered application of a variety of geographical and fieldwork skills, including the use of spatial technologies, to identify and examine geographical issues.  Clear and coherent communication of relevant geographical information, using appropriate subject-specific terminology and visual representations. |
| B | Well-considered knowledge and informed understanding of geographical concepts.  Well-considered knowledge and informed understanding of natural, built, economic, and/or social characteristics of places. | Well-informed analysis of the interactions between, and interdependence of, people and environments at local, national, or global levels.  Detailed and well-considered analysis and evaluation of information to determine possible outcomes, make justifiable recommendations, and form conclusions. | Well-considered application of different geographical and fieldwork skills, including the use of spatial technologies, to identify and examine geographical issues.  Clear communication of relevant geographical information, using appropriate subject-specific terminology and visual representations. |
| C | Considered knowledge and understanding of geographical concepts.  Considered knowledge and informed understanding of natural, built, economic, and/or social characteristics of places. | Informed analysis of the interactions between, and interdependence of, people and environments at local, national, or global levels.  Considered analysis and some evaluation of information to determine possible outcomes, make recommendations, and form conclusions. | Competent application of geographical and fieldwork skills, including the use of spatial technologies, to identify and examine geographical issues.  Competent communication of generally relevant geographical information, using mostly appropriate subject-specific terminology and visual representations. |
| D | Recognition and basic understanding of some geographical concepts.  Basic awareness and some understanding of aspects of natural, built, economic, or social characteristics of places. | Basic consideration and description of the interactions between, and interdependence of, people and environments at local, national, or global levels.  Superficial consideration of information to describe possible outcomes and recommendations. | Some application of different geographical and fieldwork skills, which may include the use of spatial technologies.  Basic communication of some geographical information, using occasional subject-specific terminology and visual representations. |
| E | Identification of one or more geographical concepts.  Emerging awareness of aspects of natural, built, economic, or social characteristics of places. | Brief or attempted description of the interactions between, or interdependence of, people and environments at local, national, or global levels.  Description of information linked to a possible outcome or recommendation. | Limited application of geographical and fieldwork skills.  Attempted communication of geographical information, with limited use of subject-specific terminology or visual representations. |