S2 Biology SPECIES SURVIVAL Learning Outcome checklist

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| Activity | -/+/\* | by the end of the unit you should know… |
| 1. Asexual reproduction |  | * **reproduction** makes new organisms to replace those lost in the species
* **asexual** reproduction involves one parent
* the offspring of asexual reproduction are **genetically identical** to each other and the parent
* **yeast** is a type of fungus that reproduces by **budding**
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| 2. Hydra |  | * **hydra** are simple animals that reproduce asexually by budding
* a **clone** is a genetically identical organism produced by asexual reproduction
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| 3. sexual reproduction |  | * **sexual** reproduction involves two parents
* sexual reproduction leads to **variety** in the offspring
* the male **gametes** are **sperm**
* Sperm cells are much **smaller** than eggs and have a **tail** to allow them to swim
* the **sperm duct** is the tube that sperm swim along to exit the male’s body
* the **penis** becomes stiff to allow it to be placed inside the vagina to deposit the sperm
* the **testes** make sperm, **millions** of sperm are released at one time
* the female **gamete** is the **egg**
* the egg is large & has a **food store**
* the **ovary** makes eggs, only **one** egg (occasionally two) is released at a time.
* the **oviduct** connects the ovary to the uterus and is the site of fertilisation
* the **uterus** is where a foetus develops
* the **vagina** is where the sperm are deposited by the penis, also called the birth canal
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| 4.Fertilisation & development of the foetus |  | * **fertilisation** is the fusion of the sperm and the egg
* the fertilised egg is called the **zygote**
* in a **line graph** the **scales** must go up in **regular steps**, the axes must be **labelled**, points **plotted accurately** and joined with a **line**
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| 5. Life support & protection |  | * the **amniotic** **sac** is a fluid filled bag that acts like a shock absorber to protects the foetus
* **amniotic fluid** is the liquid in the amniotic sac
* the **placenta** is the organ that allows the mothers blood and foetus’ blood to come close enough to exchange materials
* **umbilical cord** is a collection of blood vessels that connects the foetus to the placenta
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| 6.Threats to the foetus |  | * **Thalidomide** was given to women to prevent morning sickness but affected limb development in the foetus
* **Alcohol** can harm the foetus
* **Smoking** passes on harmful chemicals to the foetus
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| 7. Survival rates |  | * **internal fertilisation** is when the sperm and egg meet inside the female’s body
* **external fertilisation** is when the sperm and egg meet outside the female’s body
* internal fertilisation and internal development in mammals leads to a **higher survival rate**
* **birds** use external fertilisation but the offspring develop outside the mothers body in an egg lowering survival rate compared to mammals
* **frogs** and **fish** use external fertilisation and external development and have very low survival rates
* a **high survival rate reduces the number of eggs released** by an animal and vice versa
* **percentage** calculation = part ÷ total x100
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| 8. Behaviour and survival |  | * animals can **respond** to a **stimulus** in a way that helps them to survive
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| 9. Types of behaviour |  | * **innate** behaviour is in-born
* **learned** behaviour is developed through teaching, observation or experience
* **migration** is a long journey which allows animals to move to favourable living conditions
* **waggle** **dance** allows bees to communicate information about food sources
* **habituation** allows animals to avoid wasting energy responding to harmless stimuli
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