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** |
| 2. Hydra |  | * **hydra** are simple animals that reproduce asexually by budding * a **clone** is a genetically identical organism produced by asexual reproduction |
| 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 |
| 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** |
| 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 |
| 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 |
| 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 |
| 8. Behaviour and survival |  | * animals can **respond** to a **stimulus** in a way that helps them to survive |
| 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 |