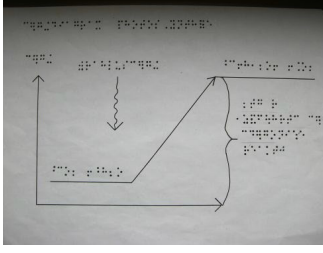
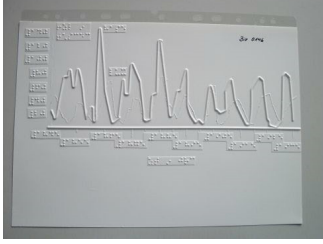
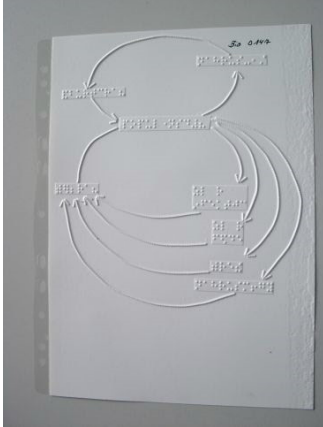
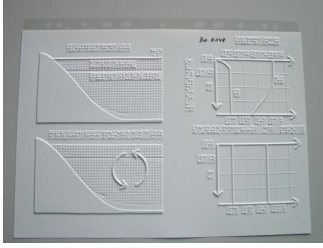
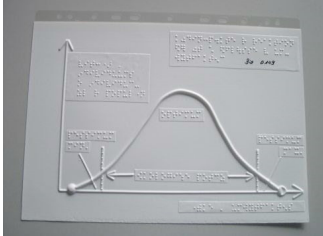
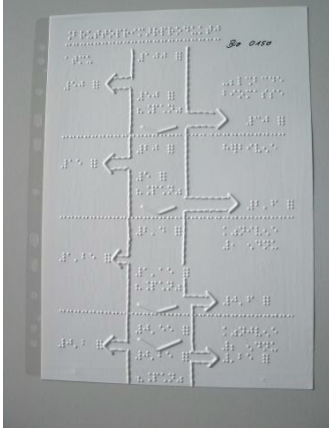

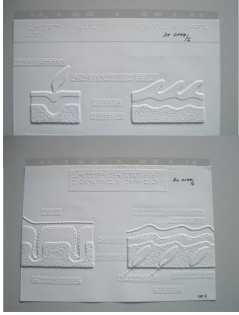
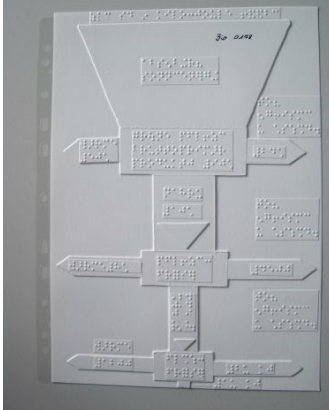
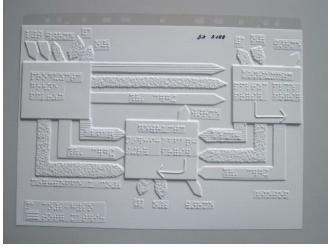
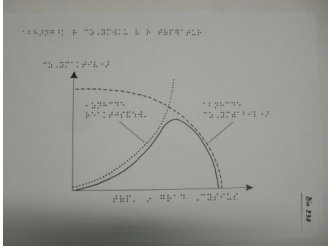
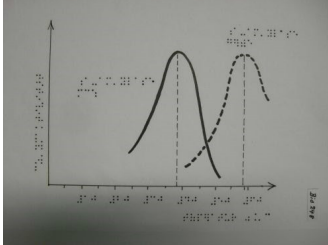
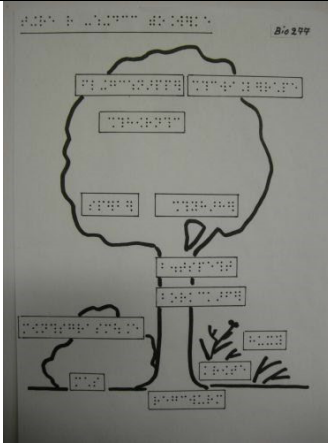
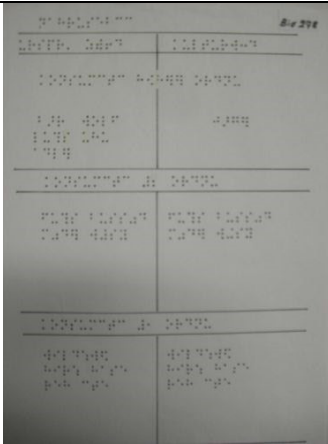
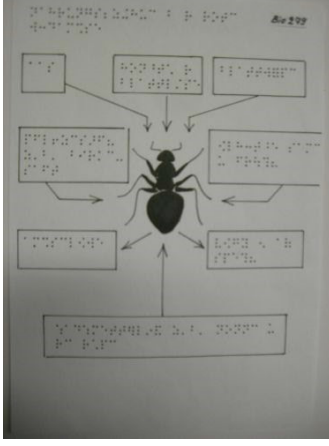
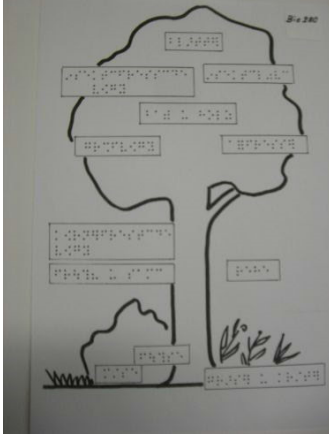
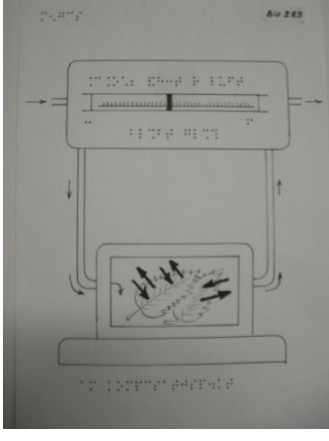
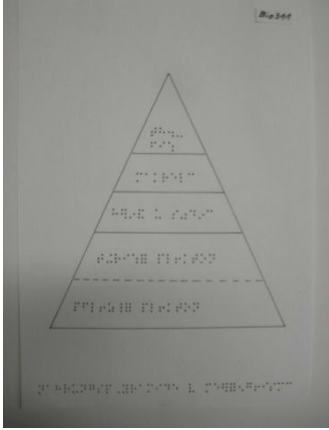


# TOB0004 Ökologie

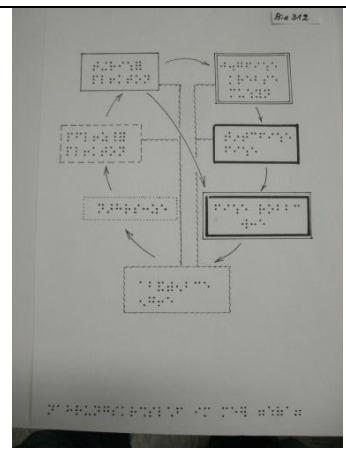
Signatur	Titel	Bild
BIO0094	Energiediagramm Fotosynthese	 <p>The diagram illustrates the energy flow in photosynthesis. It shows light energy entering a system, which is then converted into chemical energy stored in a product. The energy levels are represented by a series of steps, with a wavy arrow indicating the input of light energy.</p>
BIO0146	Das Räuber-Beute-Verhältnis (Hase-Luchs)	 <p>The graph shows the cyclical relationship between hare and lynx populations. The hare population (prey) peaks first, followed by the lynx population (predator). The populations then decline, with the predator population lagging behind the prey population. The cycle repeats over time.</p>
BIO0147	Populationsdichte	 <p>The diagram illustrates population density over time. It shows a cycle where the population density increases, reaches a peak, and then declines. The cycle repeats, with the population density remaining low for a period before increasing again.</p>
BIO0148	Ökologie See: Frühling, Sommer, Herbst, Winter	 <p>The graphs show seasonal changes in lake ecology. The top graph shows temperature increasing in spring and summer, and decreasing in autumn and winter. The bottom graph shows the seasonal cycle of phytoplankton and zooplankton populations, with phytoplankton peaking in spring and zooplankton peaking in summer.</p>
BIO0149	Stärke des Umweltfaktors	 <p>The graph shows the strength of an environmental factor over time. The strength increases, reaches a peak, and then declines. The cycle repeats, with the strength remaining low for a period before increasing again.</p>

<p>BIO0150</p>	<p>Bruttoprimärproduktion Atmung - Biomasse</p>	
<p>BIO0151</p>	<p>Köpfe von Füchsen, Hasen und Mäusen aus dem heißen Wüstengürtel Amerikas, der gemäßigten Zone und aus dem Nordpolargebiet (Allensche Regel)</p>	
<p>BIO0177</p>	<p>Vergleichende Untersuchung an der Körperbedeckung der Wirbeltiere</p>	
<p>BIO0178</p>	<p>Energiefluss durch eine Biozönose</p>	

BIO0188	Gliederung eines Ökosystems	
BIO0238	Abhängigkeit der Enzymwirkung von Temperatur (A) u. pH Wert (B)	
BIO0248	Temperaturabhängigkeit der Enzymaktivität	
BIO0277	Tiere der verschiedenen Stockwerke	
BIO0278	Nahrungsebenen der Tiere	

<p>BIO0279</p>	<p>Nahrungsbeziehungen der großen Waldameise</p>	
<p>BIO0280</p>	<p>Nahrungsspezialisten am Baum</p>	
<p>BIO0283</p>	<p>Biomasseverlust bei der Arbeit</p>	
<p>BIO0311</p>	<p>Nahrungspyramide von Meeresorganismen</p>	

BIO0312 Nahrungskreislauf im Meer

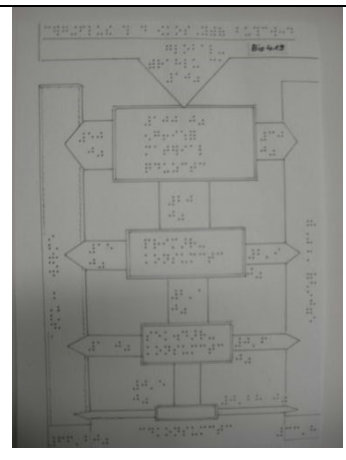


BIO0404 Einheimische Laubbäume und ihre Merkmale

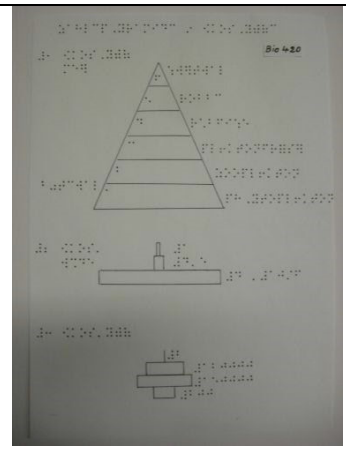
The table, labeled 'Bio 404', lists characteristics of native deciduous trees. It has three columns: 'Baumart' (Tree species), 'Blattform' (Leaf shape), and 'Blattmerkmale' (Leaf characteristics). The rows contain drawings of different leaf shapes and their corresponding descriptions.

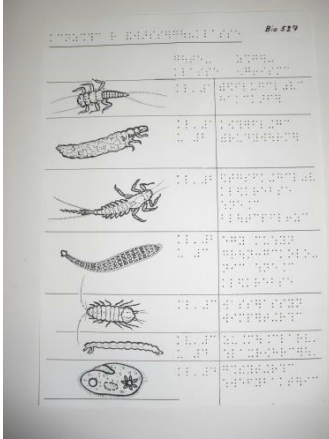
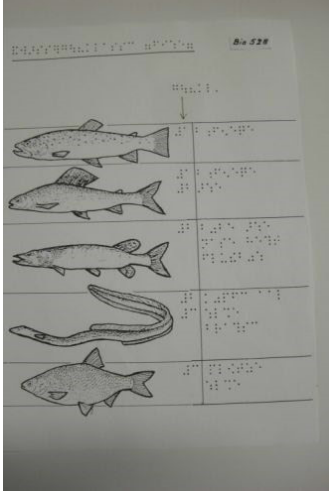
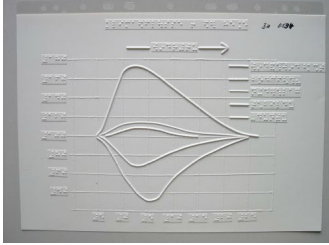
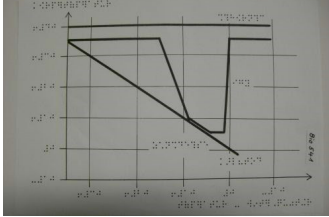

Baumart	Blattform	Blattmerkmale
Buche	[Drawing of a beech leaf]	... glatte Blattoberfläche ...
Hainbuche	[Drawing of a hornbeam leaf]	... gezackte Blattoberfläche ...
Buche	[Drawing of a beech leaf]	... glatte Blattoberfläche ...
Buche	[Drawing of a beech leaf]	... glatte Blattoberfläche ...
Buche	[Drawing of a beech leaf]	... glatte Blattoberfläche ...


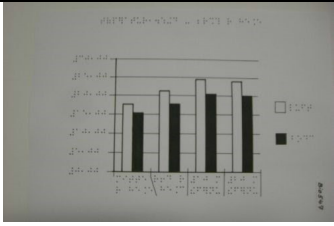
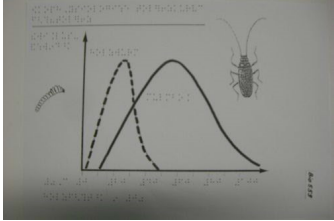
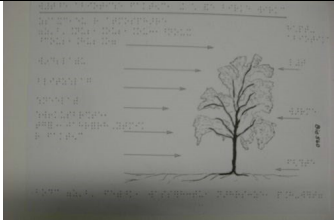
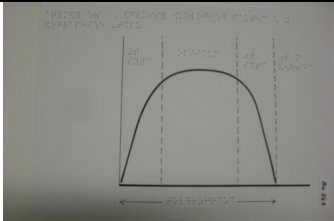
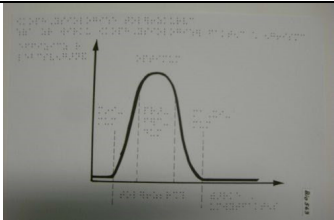
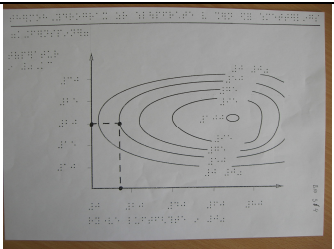
BIO0419 Energiefluss durch das Ökosystem Buchenwald

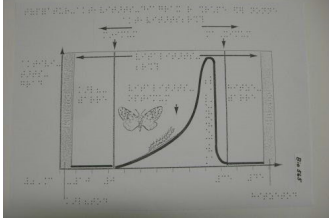
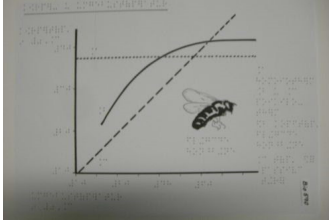
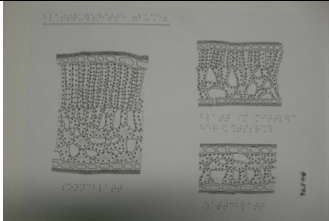
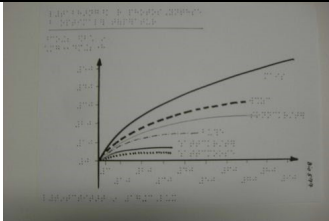
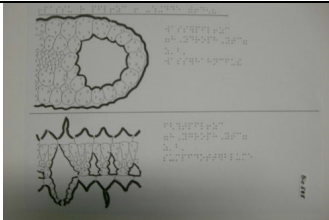
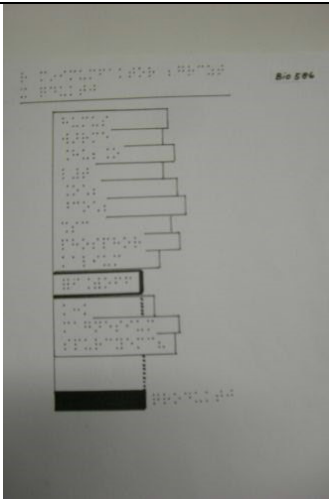


BIO0420 Zahlenpyramiden in Ökosystemen

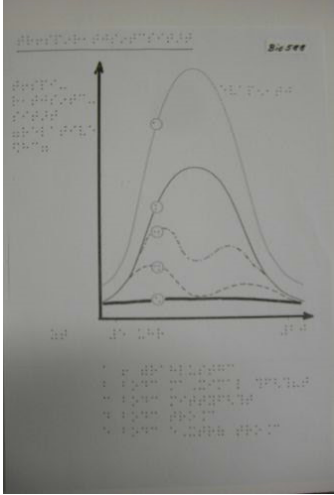
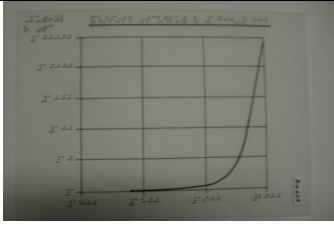
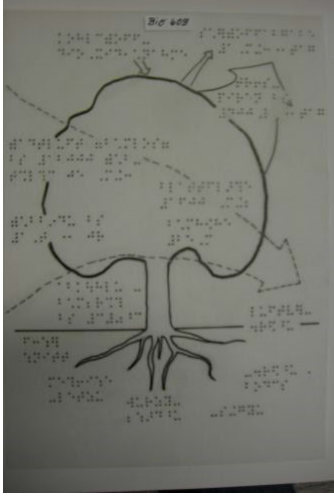
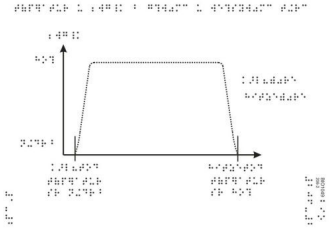
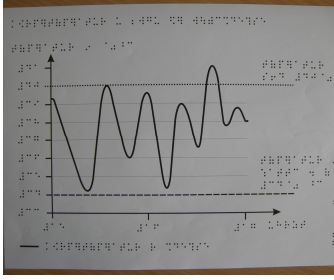


BIO0527	Güteklassen des Wassers (Zeigerorganismen)	
BIO0528	Gewässergüteklassen (Fische)	
BIO0534	Klimaeinflüsse an einer Hecke	
BIO0541	Temperaturvergleich zwischen Reptilien und Säugern (Eichhörnchen, Igel, Zauneidechse)	
BIO0543	Smogbildung (Schema)	

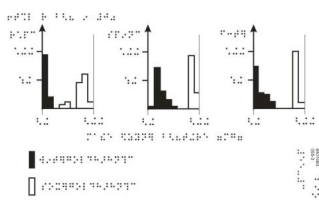
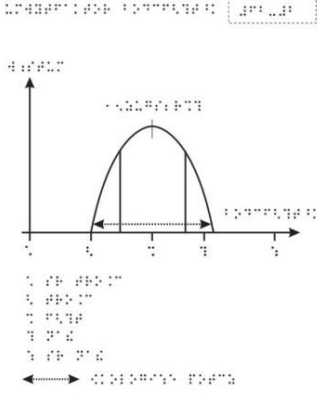
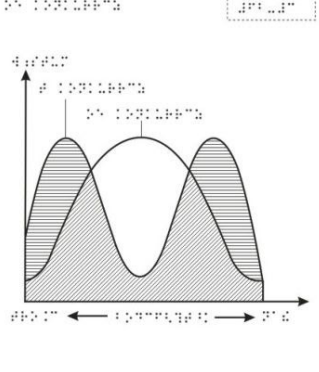
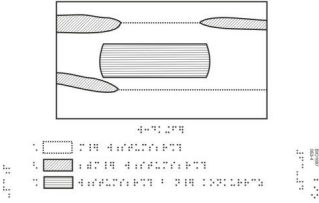
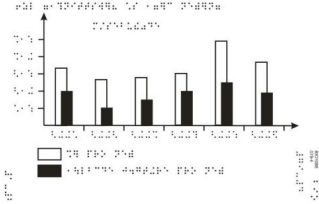
BIO0546	Schematischer Aufbau einer Hecke	
BIO0547	Temperaturunterschiede im Bereich einer Hecke	
BIO0559	Ökophysiologische Toleranzkurven (Feuchtetoleranz) (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 9)	
BIO0560	Wichtige abiotische Faktoren, die auf eine Birke wirken	
BIO0562	Allgem. Schema des Einflusses ökologischer Faktoren auf die geogr. Verteilung (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 9)	
BIO0563	Ökophysiologische Toleranzkurven (Wirkung von Öko-Faktoren auf Organismen) (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 9)	
BIO0564	Thermohydrogramm zur Schlüpfrate von Eiern eines Schmetterlings (Kiefernspinner) (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 9)	

BIO0565	Temperatur-Aktivitäts-Diagramm der Eiraupe einer Nonne (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 9)	
BIO0570	Körper u. Umgebungstemperatur (Honigbiene im Flug) (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 13)	
BIO0576	Blattquerschnitte (Buche) Licht-Schatten	
BIO0577	Lichtabhängigkeit der Fotosynthese bei optimaler Temperatur	
BIO0585	Anpassung der Pflanzen an den Standort (Mesophyten und Xerophyten – Hydrophyten und Hygrophyten)	
BIO0586	Der Minimumfaktor begrenzt die Produktion	

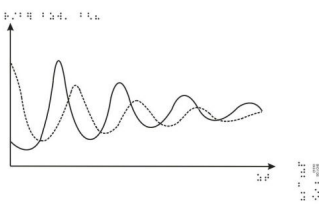
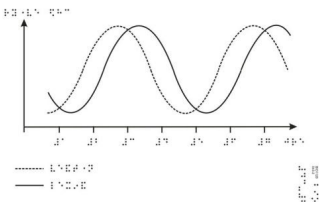
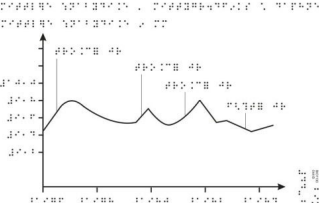
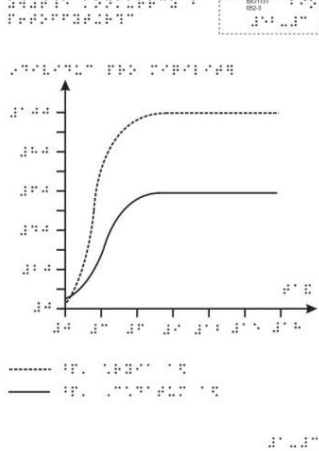
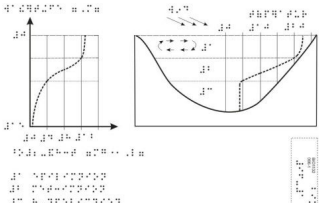
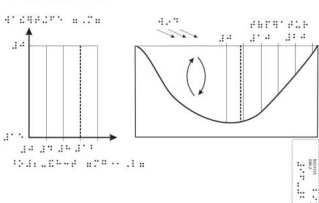


<p>BIO0588</p>	<p>Transpirationsintensität</p>	 <p>A line graph with a vertical y-axis and a horizontal x-axis. The x-axis is labeled with 't' and has three points marked. There are three curves: a solid line with the highest peak, a dashed line with a lower peak, and a dotted line with the lowest peak. All curves show a bell-shaped distribution, peaking in the middle of the x-axis range.</p>
<p>BIO0603</p>	<p>Geschätzter Artenverlust von 1700 – 2000 (Kurven)</p>	 <p>A line graph with a vertical y-axis and a horizontal x-axis. The x-axis is labeled with years from 1700 to 2000. The y-axis represents species loss. A single curve starts near zero in 1700 and remains low until around 1850, then rises sharply in an exponential-like fashion towards the year 2000.</p>
<p>BIO0609</p>	<p>Biologie GN Ökologie (bsv.) ISBN 3-7627-4268-5, Seite 29 Abb. Baum</p>	 <p>A schematic diagram of a tree. The canopy is represented by a large, rounded shape at the top. Below it is the trunk, which branches out into a root system at the bottom. Arrows point from various parts of the tree to labels, though the text is illegible. The diagram illustrates the basic anatomy of a tree.</p>
<p>BIO1049</p>	<p>Temperatur und Beweglichkeit bei gleichwarmen und wechselwarmen Tieren (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 12)</p>	 <p>A line graph with a vertical y-axis and a horizontal x-axis. The y-axis is labeled with 'T' and 'B'. The x-axis is labeled with 't'. There are two curves: a solid line that rises to a constant horizontal plateau and then falls, and a dashed line that remains at a constant low level throughout the x-axis range.</p>
<p>BIO1050</p>	<p>Körpertemperatur und Bewegung bei einer Wüsteneidechse</p>	 <p>A line graph with a vertical y-axis and a horizontal x-axis. The y-axis is labeled with 'T' and 'B'. The x-axis is labeled with 't'. There are two curves: a solid line that oscillates between high and low values, and a dashed line that remains at a constant low level throughout the x-axis range.</p>

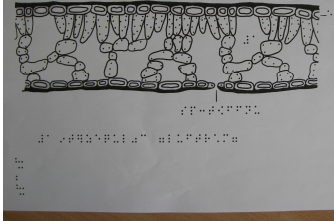
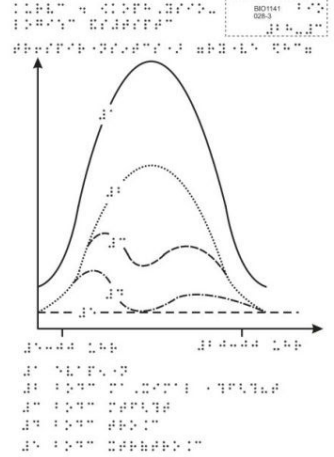
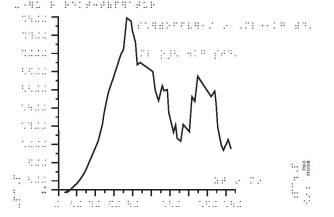
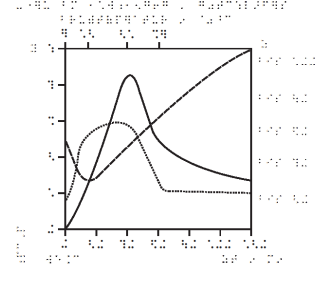
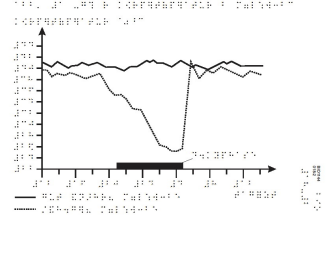
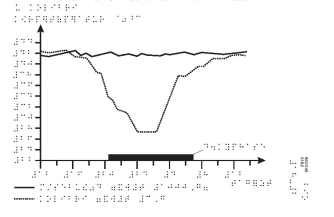
<p>BIO1052</p>	<p>Wirkung der Selektion</p>	
<p>BIO1066</p>	<p>Energiefluss in einem Ökosystem</p>	
<p>BIO1067</p>	<p>Aktivierungsenergie mit und ohne Katalysator</p>	
<p>BIO1075</p>	<p>Stickstoffkreislauf in einem terrestrischen Ökosystem</p>	
<p>BIO1081</p>	<p>Lichtverhältnisse und Pflanzenwachstum im Laubwald</p>	
<p>BIO1082</p>	<p>Fortbewegung von Winter- und Sommergoldhähnchen bei der Nahrungssuche</p>	

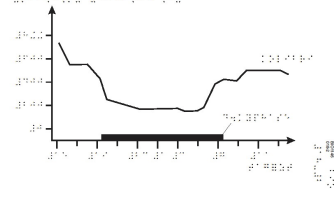
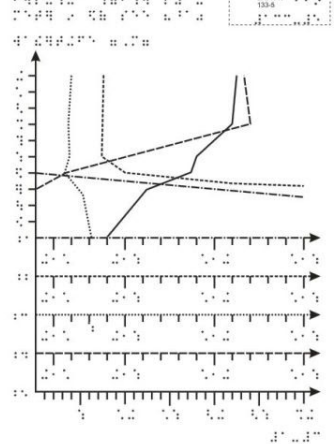
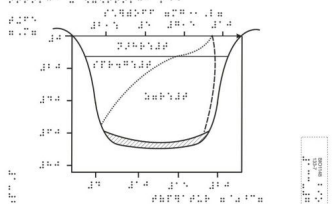
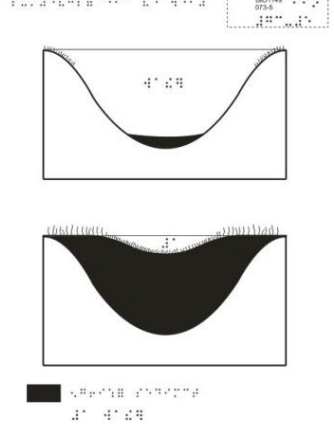
<p>BIO1083</p>	<p>Beutetiere von Winter- und Sommergoldhähnchen</p>	 <p>Legend:  <span style="display:inline-block; width:10px; height:10px; background-color:black;"></span> Wintergoldhähnchen  <span style="display:inline-block; width:10px; height:10px; border:1px solid black;"></span> Sommergoldhähnchen</p>
<p>BIO1084</p>	<p>Toleranzkurve der Rotbuche: Umweltfaktor Bodenfeuchtigkeit</p>	 <p>Legend:  <span style="display:inline-block; width:10px; height:10px; background-color:grey;"></span> Rotbuche</p>
<p>BIO1085</p>	<p>Wachstum der Waldkiefer mit und ohne Konkurrenz</p>	 <p>Legend:  <span style="display:inline-block; width:10px; height:10px; background-color:grey;"></span> mit Konkurrenz  <span style="display:inline-block; width:10px; height:10px; background-color:white; border:1px solid black;"></span> ohne Konkurrenz</p>
<p>BIO1087</p>	<p>Ökogramme verschiedener Baumarten</p>	 <p>Legend:  <span style="display:inline-block; width:10px; height:10px; background-color:lightgrey;"></span> Buche  <span style="display:inline-block; width:10px; height:10px; background-color:darkgrey;"></span> Kiefer  <span style="display:inline-block; width:10px; height:10px; background-color:mediumgrey;"></span> Eiche</p>
<p>BIO1088</p>	<p>Wechselbeziehungen zwischen Feldmäusen und Mäusebussarden</p>	 <p>Legend:  <span style="display:inline-block; width:10px; height:10px; background-color:white; border:1px solid black;"></span> Mäusebussard  <span style="display:inline-block; width:10px; height:10px; background-color:black;"></span> Feldmaus</p>

<p>BIO1089</p>	<p>Feldmaus-Population und Mäuse-Population beeinflussen sich</p>	
<p>BIO1090</p>	<p>Stadien der Waldentwicklung nach einem Kahlschlag</p>	
<p>BIO1117</p>	<p>Toleranzkurve - Reaktion der Lebewesen (Schema)</p>	
<p>BIO1123</p>	<p>Räuber - Beute - System (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 46)</p>	
<p>BIO1124</p>	<p>Räuber - Beute - System (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 46)</p>	
<p>BIO1125</p>	<p>Räuber (relative Einheiten) (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 46)</p>	

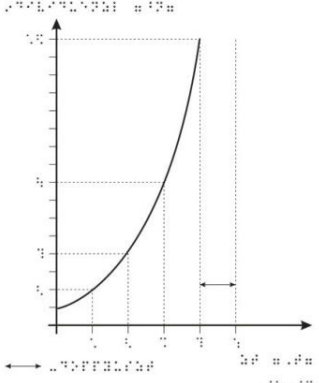
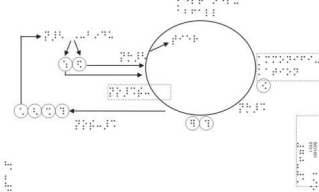
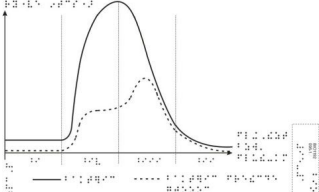
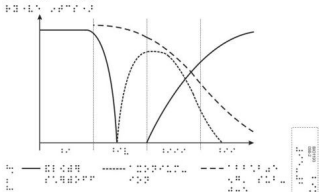
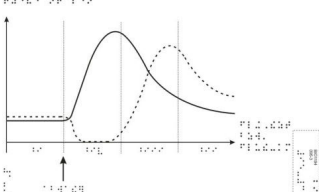
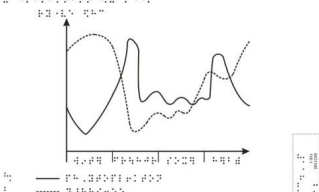
<p>BIO1126</p>	<p>Räuber bzw. Beute (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 46)</p>	
<p>BIO1128</p>	<p>Dichteschwankungen von Lemmingpopulation und Vegetation</p>	
<p>BIO1130</p>	<p>Mittlere Schnabeldicke des Mittelgrundfinks auf Daphne</p>	
<p>BIO1131</p>	<p>Zwischenartliche Konkurrenz bei Pantoffeltierchen (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 30)</p>	
<p>BIO1132</p>	<p>Sommerstagnation im See (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 100)</p>	
<p>BIO1133</p>	<p>Herbstzirkulation im See (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 100)</p>	

<p>BIO1134</p>	<p>Winterstagnation im See (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 100)</p>																										
<p>BIO1135</p>	<p>Frühjahrszirkulation im See (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 100)</p>																										
<p>BIO1136</p>	<p>Oligotropher See im Sommer</p>	<table border="1" style="margin-left: auto; margin-right: 0;"> <tr> <td>10m</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> </tr> <tr> <td>8m</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> </tr> <tr> <td>6m</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> </tr> <tr> <td>4m</td> <td>-</td> <td>+</td> <td>+</td> <td>+</td> </tr> <tr> <td>2m</td> <td>-</td> <td>+</td> <td>+</td> <td>+</td> </tr> </table>	10m	+	+	+	-	8m	+	+	+	-	6m	+	+	+	-	4m	-	+	+	+	2m	-	+	+	+
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4m	-	+	+	+																							
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<p>BIO1137</p>	<p>Verlauf der Körpertemperatur eines Kamels unter Wasserentzug und mit täglicher Wasserration</p>																										
<p>BIO1138</p>	<p>Kängururatte-Temperatur und Feuchtigkeit der Luft beim Ein- und Ausatmen</p>																										

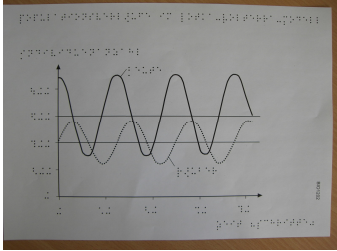
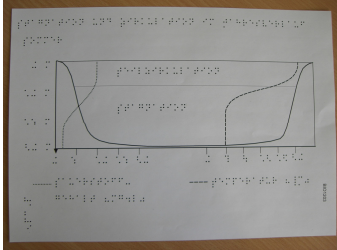
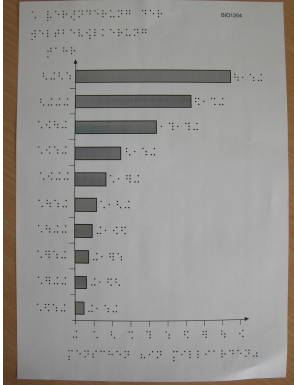
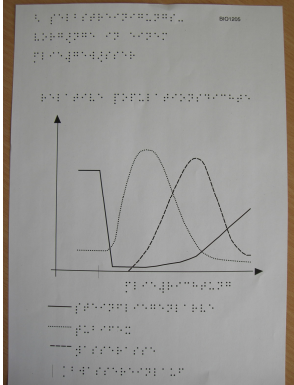
<p>BIO1140</p>	<p>Blattquerschnitte einer Buche (Sonnenblatt, Schattenblatt)</p>	
<p>BIO1141</p>	<p>Kurven unter ökophysiologischen Gesichtspunkten</p>	
<p>BIO1142</p>	<p>Veränderung der Rektaltemperatur</p>	
<p>BIO1143</p>	<p>Veränderung beim Aufwachvorgang des Gartenschlängers</p>	
<p>BIO1144</p>	<p>Vergleich der Körpertemperatur einer hungrigen und einer wohlgenährten Mehlschwalbe im Tagesverlauf</p>	
<p>BIO1145</p>	<p>Vergleich der Körpertemperatur eines Mäusebussards ca. 1Kg und eines Kolibris 3g</p>	

<p>BIO1146</p>	<p>Tagesgang des Stoffwechsels beim Robinkehlkolibri</p>	
<p>BIO1147</p>	<p>Untersuchungen chemischer Parameter in einem See</p>	
<p>BIO1148</p>	<p>Vertikale Temperatur und Sauerstoffverhältnisse in einem oligotrophen und eutrophen See (Ökologie von Schroedel, ISBN 3-507-10528-4, S. 104)</p>	
<p>BIO1149</p>	<p>Sukzessionsstadien</p>	



<p>BIO1190</p>	<p>Populationswachstum</p>	 <p>The graph shows exponential population growth. The y-axis represents population size (N) and the x-axis represents time (t). A curve starts at an initial population size <math>N_0</math> and increases exponentially. Key points on the curve include <math>N_1</math> at time <math>t_1</math>, <math>N_2</math> at time <math>t_2</math>, and <math>N_3</math> at time <math>t_3</math>. The time interval between <math>t_1</math> and <math>t_2</math> is labeled as <math>\Delta t</math>. The population size at <math>t_2</math> is <math>N_2</math>, and at <math>t_3</math> it is <math>N_3</math>. The graph illustrates that the same time interval <math>\Delta t</math> results in a larger absolute increase in population size as the population grows.</p>
<p>BIO1191</p>	<p>Der Stickstoffkreislauf</p>	 <p>The diagram illustrates the nitrogen cycle. It shows the flow of nitrogen between the atmosphere, soil, and living organisms. Key processes include: <ul style="list-style-type: none"> <li><b>Atmosphere:</b> Nitrogen fixation (<math>N_2</math> to <math>NH_4^+</math>) and denitrification (<math>NH_4^+</math> to <math>N_2</math>).</li> <li><b>Soil:</b> Nitrification (<math>NH_4^+</math> to <math>NO_3^-</math>) and assimilation of <math>NH_4^+</math> and <math>NO_3^-</math> by plants.</li> <li><b>Living Organisms:</b> Uptake of <math>NH_4^+</math> and <math>NO_3^-</math> by plants, and excretion of <math>NH_4^+</math> and <math>NO_3^-</math> by animals.</li> <li><b>Decomposition:</b> Breakdown of organic matter into <math>NH_4^+</math> and <math>NO_3^-</math>.</li> </ul> </p>
<p>BIO1192</p>	<p>Organismen in einem mit organischen Haushaltsabwässern belasteten Fluss</p>	 <p>The graph shows the response of organisms in a river to organic household wastewater pollution. The y-axis represents the number of organisms (N) and the x-axis represents time (t). A solid line shows the population of organisms that die due to the pollution, which peaks early and then declines. A dashed line shows the population of organisms that survive, which peaks later and then declines. The graph illustrates that the population of organisms that die peaks earlier than the population of organisms that survive.</p>
<p>BIO1193</p>	<p>Chemisch-biologisch Abbauvorgänge in einem organisch belasteten Fluss</p>	 <p>The graph shows chemical and biological breakdown processes in an organically polluted river. The y-axis represents concentration (C) and the x-axis represents time (t). A solid line shows the concentration of organic matter, which decreases over time. A dashed line shows the concentration of inorganic matter, which increases over time. The graph illustrates that the concentration of organic matter decreases as the concentration of inorganic matter increases.</p>
<p>BIO1194</p>	<p>Produktion und Atmung in einem organisch belasteten Fluss</p>	 <p>The graph shows production and respiration in an organically polluted river. The y-axis represents concentration (C) and the x-axis represents time (t). A solid line shows the concentration of organic matter, which decreases over time. A dashed line shows the concentration of inorganic matter, which increases over time. The graph illustrates that the concentration of organic matter decreases as the concentration of inorganic matter increases.</p>
<p>BIO1195</p>	<p>Jahreszeitliche Veränderung abiotischer und biotischer Faktoren im Epilimnion eines Sees</p>	 <p>The graph shows seasonal changes in abiotic and biotic factors in the epilimnion of a lake. The y-axis represents concentration (C) and the x-axis represents time (t). A solid line shows the concentration of organic matter, which peaks in the summer. A dashed line shows the concentration of inorganic matter, which peaks in the winter. The graph illustrates that the concentration of organic matter peaks in the summer, while the concentration of inorganic matter peaks in the winter.</p>

<p>BIO1196</p>	<p>Veränderung der Umweltfaktoren mit zunehmender Tiefe in einem See während der Sommerstagnation</p>	
<p>BIO1198</p>	<p>Toleranz und Präferenz beim Mehlwurm bzgl. der Temperatur</p>	
<p>BIO1199</p>	<p>Ökologische Potenzen</p>	
<p>BIO1200</p>	<p>pH-Toleranz der drei Arten Polycelis felina, Dugesia gonocephala, Crenobia alpina</p>	
<p>BIO1201</p>	<p>Oszillierende Wühlmauspopulation</p>	

<p>BIO1202</p>	<p>Populationsverläufe im Lotka-Volterra-Modell</p>	
<p>BIO1203</p>	<p>Stagnation und Zirkulation im Jahresverlauf</p>	
<p>BIO1204</p>	<p>Veränderung der Weltbevölkerung</p>	
<p>BIO1205</p>	<p>Selbstreinigungsvorgänge in einem Fließgewässer</p>	
<p>BIO1260</p>	<p>Populationsentwicklung von Schwebgarnelen, Lachsen und Weißkopfseeadler</p>	